# Water Security Agency

# Annual Report for 2015-16

saskatchewan.ca

Government of Saskatchewan

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# Letters of Transmittal

Her Honour, the Honourable Vaughn Solomon Schofield, Lieutenant Governor of Saskatchewan

May it Please Your Honour:

The Government of Saskatchewan is committed to continuing the steady growth of the province of Saskatchewan, while observing the principles of accountability, transparency and responsible spending.

The 2015-16 Annual Report shows Water Security Agency's progress on its initiatives, strategies and other commitments as of March 31, 2016. This report also documents progress by Water Security Agency and partner ministries and agencies on implementing the 25 Year Saskatchewan Water Security Plan.

I respectfully submit the Annual Report for the Water Security Agency for the fiscal year ending March 31, 2016

*The Honourable Herb Cox*
*Minister Responsible for the Water Security Agency*

The Honourable Herb Cox

Minister Responsible for the Water Security Agency

I have the honour of submitting the Annual Report of the Water Security Agency for the fiscal year ending March 31, 2016

Management is responsible for the financial and administrative management of the Water Security Agency and for preparing this report in accordance with Government's systems of planning, measuring and reporting. All key actions and associated economic or fiscal implications in this report are, to the best of my knowledge, accurate and reliable

*Wayne Dybvig*
*President, Water Security Agency*

# Introduction

This annual report for the Water Security Agency presents the Agency's results for the fiscal year ending March 31, 2016. It provides results of publicly committed strategies, key actions and performance measures identified in the Water Security Agency's Plan for 2015-16. It also reflects progress toward commitments from the Government Direction for 2015-16: Keeping Saskatchewan Strong, the Saskatchewan Plan for Growth – Vision 2020 and Beyond, throne speeches and other commitments of the Agency.

The annual report demonstrates the Ministry's commitment to effective public performance reporting, transparency and accountability to the public.

In October 2012, Government introduced the Saskatchewan Plan for Growth, as well as the 25 Year Saskatchewan Water Security Plan, which established the Water Security Agency. The Water Security Agency implements the 25 Year Saskatchewan Water Security Plan, providing a sustainable approach to water use that will protect the quality and quantity of water now and for the future.

This 2015-16 Annual Report is presented in relation to the Saskatchewan Plan for Growth.

Appendix A of this report provides a more detailed progress report on the 89 actions of the 25 Year Saskatchewan Water Security Plan, toward "water supporting economic growth, quality of life and environmental well-being".

## Alignment with Government's Direction

The Ministry's activities in 2015-16 align with Government's vision and four goals:

**Saskatchewan's Vision**

*"... to be the best place in Canada – to live, to work, to start a business, to get an education, to raise a family and to build a life."*

**Sustaining growth and opportunities for Saskatchewan people**

**Meeting the challenges of growth**



**Securing a better quality of life for all Saskatchewan people**



**Delivering responsive and responsible government**

Together, all ministries and agencies support the achievement of Government's four goals and work towards a secure and prosperous Saskatchewan.

# Agency Overview

The Water Security Agency is a unique organization in Canada - bringing together all of government's core water management responsibilities in one place. The Agency manages the province's water supply, protects water quality, ensures safe drinking water and treatment of wastewater, owns and manages 49 dams and related water supply channels, reduces flood and drought damage, protects aquatic habitat and provides information about water. *The Saskatchewan 25 Year Water Security Plan* guides our actions, ensuring a sustainable approach to water use that will protect the quality and quantity of water now and for the future.

The Water Security Agency reports to the Minister Responsible for Saskatchewan Water security Agency, who also serves as a one person Board of Directors.

The Water Security Agency budgeted 221.6 full-time equivalents (FTE) to deliver its programs and services in 2015-16. Actual utilization for 2015-16 came in at 194.6. The underutilization was mainly the result of FTE management across the Agency.

**Water Quality and Safe Drinking Water**

The Water Security Agency leads the ongoing planning, implementation and reporting associated with drinking water governance and management and inspects and regulates compliance for all of the 810 regulated water works and 588 regulated wastewater facilities in Saskatchewan. The Agency monitors water quality at 24 primary surface water quality stations in Saskatchewan and manages the provincial drinking water information database (Environmental Management System – EMS) that stores all the water quality and inspection data for all regulated works, as well as the collected surface water quality data. The Agency also manages the SaskH20.ca website, which presents drinking water-related information gathered from water management authorities within the province.

**Maintaining and Investing in Water Infrastructure**

The Water Security Agency maintains and operates 49 dams and 130 kilometres of conveyance channels, plus ancillary works, and makes significant investments in the rehabilitation and upgrading of this infrastructure each year.

**Water Supply**

The Water Security Agency provides hydrology services necessary for proper water management including flood forecasting, operation planning, sustainable water allocation, and low risk building development. In partnership with the Government of Canada, Water Security Agency operates a 283 station hydrometric network to collect data on stream flows and lake levels. It also operates the provincial ground water monitoring network, conducts regional ground water mapping and resource assessment, and provides information to citizens and industry to help locate ground water supplies. The Water Security Agency also represents Saskatchewan on transboundary water issues through membership in organizations like the Prairie Provinces Water Board.

**Sustainable Water Allocation**

All major surface and ground water allocations, including municipal, industrial, irrigation and intensive livestock use, require approval by the Water Security Agency to ensure sustainable water use.

**Reducing Flood Damage**

At the request of Ministry of Government Relations, Water Security Agency determines the flood susceptibility of proposed new subdivisions considering the 1 in 500 design standard flood. Water Security Agency also funds municipalities, and conservation and development area authorities through the Water Control Program to maintain water channels and reduce flood risk. The Emergency Flood Damage Reduction Program helps clients prevent and mitigate imminent flood damage.

**Public Partnerships**

Effective water management and source water protection depends on public understanding, support and participation. Water Security Agency works with community representatives to develop source water protection plans for watersheds and aquifers. Plans include initiatives to help landowners improve watershed health through restoration of riparian areas, protection of grasslands and wetlands and encouragement of management practices that benefit fish and wildlife. Watershed stewardship groups lead implementation of source water protection plans with financial and technical support, from the Water Security Agency.

**Enforcement**

Ministry of Environment Conservation officers provide support to the Water Security Agency for enforcement work through a contractual agreement.

# Progress in 2015-16

## Government Goals

Sustaining growth and opportunities for Saskatchewan people
Meeting the challenges of growth
Securing a better quality of life for all Saskatchewan people
Delivering responsive and responsible government

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure appropriate allocation, provision of critical supplies and efficient use of water

## Agency Goal – Sustainable surface and groundwater supplies

## Strategy – Ensure the sustainability of our surface and ground water supplies

The WSA aims to carefully manage water allocations through licensing and monitoring, encourage wise and efficient use of water, and ensure that water quality is maintained in key provincial water resources.

### Key Actions and Results

In 2015-16, WSA made significant progress in improving water supply to growth areas with improved capacity to convey water to Buffalo Pound Lake and significant progress in rehabilitation and expansion of the M1 canal.

**Planned Action: Increase summer conveyance capacity of the Upper Qu'Appelle Channel and continue rehabilitation of the M1 Canal**

- ⇨ Testing in the fall at 8 $m^3/s$ was successful and recent modeling estimates the Upper Qu'Appelle channel capacity in August to be up to 10 $m^3/s$. The Upper Qu'Appelle channel brings water from Lake Diefenbaker to Buffalo Pound Lake, which serves as a water supply for Regina, Moose Jaw and other communities as well as for a number of industries. The successful increase in conveyance capacity means that water is available to support future growth.
- ⇨ Another 3.5 kilometres of the M1 canal was rehabilitated, bringing the total rehabilitated distance of the M1 canal to 10.8 kilometres or 48% of the total 22.5 kilometres slated for restoration.

**Planned Action: Review and update industrial, irrigation and other water rights licences**

- ⇨ This action involves reviewing existing water rights files to ensure allocations are appropriate and that licences reflect the current status of the works. The initial review of the Yorkton Water Rights files was completed in January 2016. The review of the North Battleford Water Rights files is ongoing.

**Planned Action: Complete South Saskatchewan River water availability model**

- ⇨ Modelling of the water available in the South Saskatchewan River is underway.

**Planned Action: Increase water efficiency in priority sectors**

- ⇨ Water conservation will be addressed through a new allocation policy which is under development.

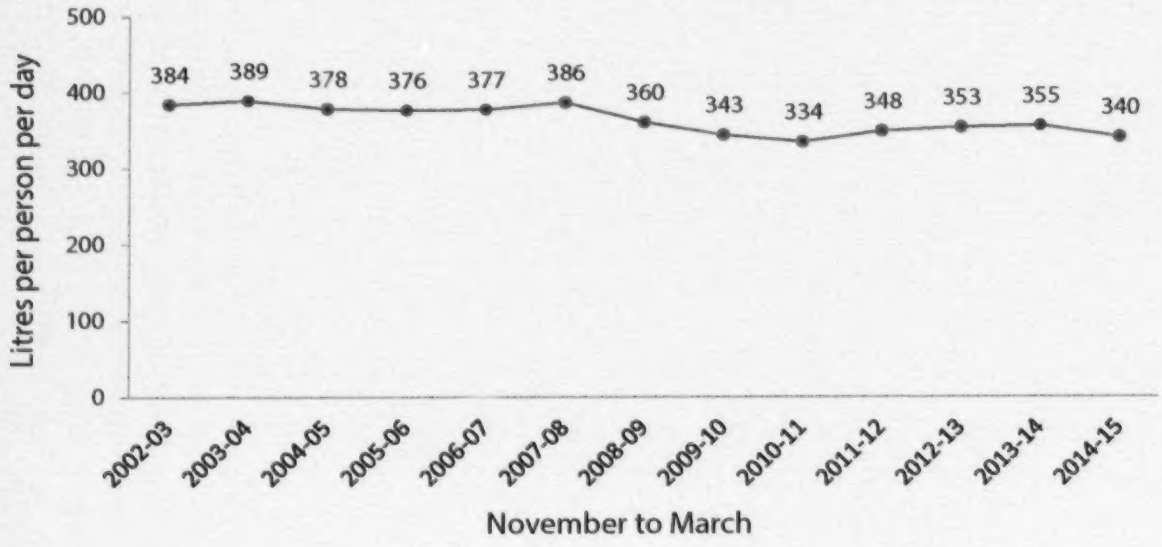
**Planned Action: Assess pricing options to promote water conservation in the industrial sector**

- ⇨ This work was deferred to next year and will be part of development of a new allocation policy.

## Performance Measures

**Winter municipal water use**

This measure indicates water conservation as it relates to municipal and First Nations community water use. It includes use in the home, in businesses, and for public services such as firefighting, road building, public pools and rinks. It also includes water lost due to system leakage.




*Source: Water Security Agency 2016*

Only the winter (November to March) consumption measure is presented, as it more clearly shows trends in municipal water use unrelated to variations in precipitation. Data is derived from community water use records submitted annually to the Water Security Agency and compared to population records from current Ministry of Health data or to current census data where Health data is not available.

Residential water conservation is a critical component of overall municipal water conservation. In 2006, residential water use in Saskatchewan accounted for an estimated 44 per cent of the total annual municipal use. The Water Security Agency promoted conversion to low flow toilets through the Provincial Toilet Replacement Rebate Program and continues to raise awareness of additional water conservation opportunities.

The measure indicates that per capita municipal water use has been generally lower since 2008-09, in comparison to the previous six years of data. Repairs to municipal water infrastructure, resulting in reduced transmission losses and the Water Security Agency's water conservation initiatives, focused on promoting residential conservation practices, directly influence this measure.

## Government Goals

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure effective and sustainable water treatment and protection of drinking water sources

## Agency Goal: Safe drinking water

## Strategy – Ensure the sustainability of our surface and ground water supplies

Drinking water safety involves a series of safeguards along the water supply route to prevent contamination. Source water protection and monitoring, waterworks operator training, appropriate treatment processes and equipment, infrastructure maintenance and inspection, water quality monitoring, and public education initiatives are all essential to ensuring safe drinking water within the province.

### Key Actions and Results

In 2015-16, WSA ensured waterworks system assessments were completed. WSA continued to oversee management of waterworks with regular inspections, education and technical advice to ensure water works operators produce safe drinking water.

### Planned Action: Encourage compliance with drinking water standards through inspections, meetings with council/ owner/ operators and more formal compliance actions such as permit requirements

⇨ In 2015-16, 964 waterworks inspections and 601 sewage works inspections were completed. Environmental protection officers provided information about the June 1, 2015 regulatory changes during inspections and at several meetings and workshops held to deliver similar messaging, such as a Saskatchewan Water and Wastewater Association (SWWA) training session for water/sewage works operators, presentation at the SWWA conference, Rapid Growth Committee meetings, and New North conference.

### Planned Action: Review and update the province's approach to ensuring safe drinking water - what has been achieved, what is left to be done and what new challenges have arisen

⇨ A preliminary review of the province's safe drinking water strategy was completed and recommendations to improve the approach were developed. The safe drinking water strategy is fundamentally sound; however some fine tuning of regulatory requirements are needed. Drafting of regulatory revisions needing attention as a result of the preliminary review was underway as of March 31, 2016. Consultation on preliminary review is still to occur. The revised *Waterworks and Sewage Works Regulations* took effect on June 1, 2015 and contain changes that will result in significant improvements in wastewater effluent quality.

### Planned Action: Complete 2015 Waterworks System Assessments as required by regulation as a means to help ensure long-term sustainable safe drinking water supplies

⇨ In 2015-16, WSA conducted the review of the 2015 Waterworks System Assessment documents that were submitted by system owners. Generally, the 2015 Waterworks System Assessment documents were satisfactory.

### Planned Action: Support Aboriginal Affairs and Northern Development Canada on review of regulations to support Bill S.8 Safe Drinking Water for First Nations, i.e.: Advance strategies, innovation and economies of scale to provide safe drinking water to rural and remote areas as well as First Nations

⇨ Regulation development for Saskatchewan First Nations under the federal *Safe Drinking Water for First Nations Act* has not yet commenced. There has been some initial discussion with Aboriginal Affairs and Northern Development Canada (AANDC) at the Federal-Provincial-Territorial Committee on Drinking Water level. In the winter of 2015-16, WSA participated and provided information to Indigenous and Northern Affairs Canada (INAC) on regulatory implementation costs. It appears that new federal administration is changing plans for the manner in which regulatory development will proceed.

### Planned Action: Develop and deliver educational materials on private drinking water system protection and water quality

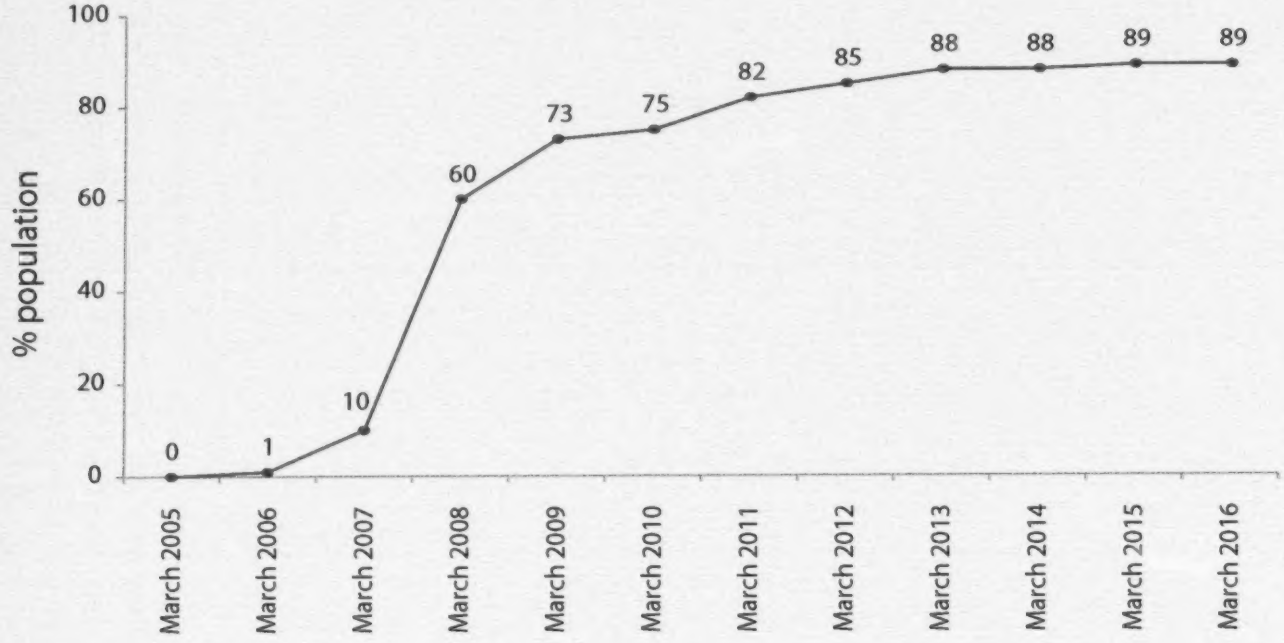
⇨ WSA developed educational materials on private drinking water system protection and water quality and delivered them at a Saskatchewan Water and Wastewater Association (SWWA) workshop. Fact sheets on these topics have also been revised by WSA and are posted on the SaskH2O website.

### Planned Action: Complete investigation of Point of Use/Point of Entry water treatment systems

⇨ The monitoring of the installation of a Point of Use/Point of Entry water treatment system was completed Feb 2016 and the report from the consultant is due April 30, 2016.

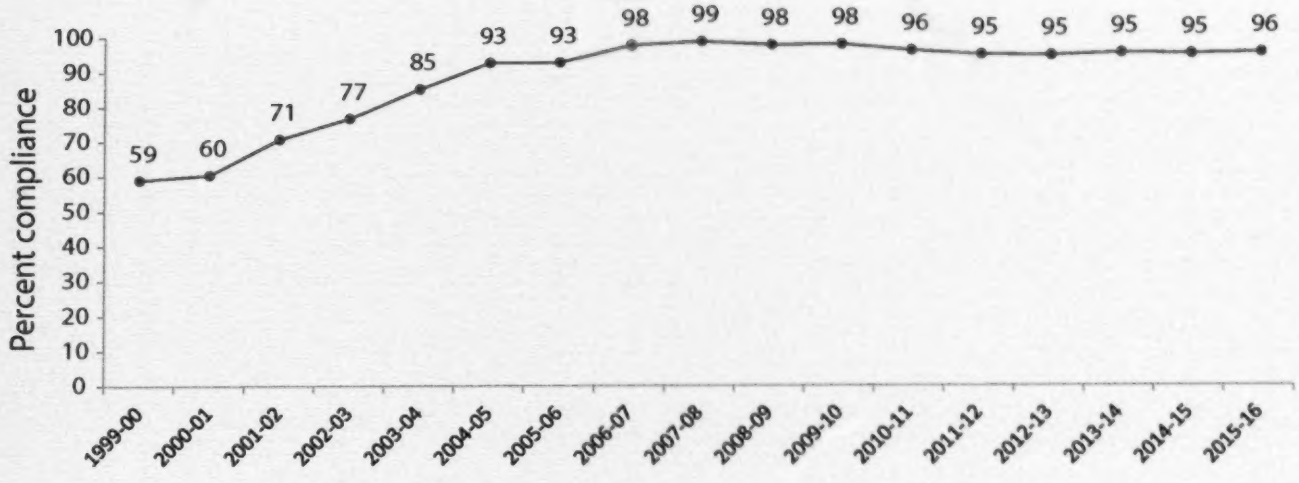
## Performance Measures

**Proportion of provincial population covered by a completed source water protection plan**




The measure indicates that the Water Security Agency targeted early planning efforts at areas of highest population, and that the majority of the province's population (89 per cent) lives in an area where a planning process has been completed. Population data is derived from 2011 Census of Canada data.

**Drinking water quality standards compliance**




*Source: Water Security Agency; SEEMS Database 2016*

The drinking water quality compliance indicator is an average of compliance with disinfection and bacteriological standards, both of which measure compliance with drinking water quality standards. This indicator looks at both the results of bacteriological water quality monitoring and the level of disinfectant present in drinking water and is a good predictor of the safety of drinking water.

Compliance with drinking water quality standards for disinfection and bacteriological quality is important as microbial contamination in water supplies can quickly result in significant illness. Proper disinfection is an important way to ensure safe drinking water and prevent the outbreak of waterborne diseases. The indicator reports on the actions of the Water Security Agency in addressing risks to the health of people and the environment and key actions related to ensuring safe and sustainable drinking water. The accuracy of this indicator is fully dependent on accurate testing and reporting by regulated waterworks operators.

The drinking water quality compliance indicator has been very good for the past few years and has remained relatively stable; with an average compliance rate of 95 per cent for the past five years. Ongoing inspection and education awareness initiatives with waterworks owners and operators are planned to sustain good performance in achieving water that is safe from bacteriological threats and meets disinfection standards.

Key risks to achieving this measure include an inability of waterworks owners or operators to comply with standards and operator certification requirements (such as a lack of staff, understanding, overall planning capacity or financial resources), catastrophic events that effect drinking water quality (such as major flooding or equipment failure) and new/evolving standards that change the base requirements.

## Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

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Delivering responsive and responsible government

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: sustain water quality and aquatic ecosystem function

## Agency Goal: Healthy water resources

### Strategy – Ensure water quality, aquatic habitat and aquatic ecosystem function are sustained

Sustaining water quality and healthy aquatic habitat and ecosystems requires careful attention to the land and water management activities that can cause damages. In addition to the management of wastewater, of particular importance are the management of non-point contaminants, implementation of agricultural best management practices, and WSA's management of its own infrastructure. Continued research into the causes of and solutions to water quality and ecosystem impairment will improve

understanding of how to best address issues of concern.

### Key Actions and Results

In 2015-16, WSA signed an agreement with Environment Canada to deliver the federal Wastewater System Effluent Regulations. This will ensure continued progress in effluent treatment to protect water quality while allowing municipalities to deal with a single regulator.

### Planned Action: Continue water quality surveys of the Qu'Appelle system initiated in summer 2013 to develop a nutrient budget and inform development of water quality objectives

⇨ Field data collection along the Qu'Appelle system has been completed. Analysis of the water quality data is underway with some preliminary results available now, and a report will be available in fall 2016 showing the source and fate of nutrients in the Qu'Appelle.

### Planned Action: Implement Parallel Growth Policy agreements for sewage works under growth and capacity related pressures

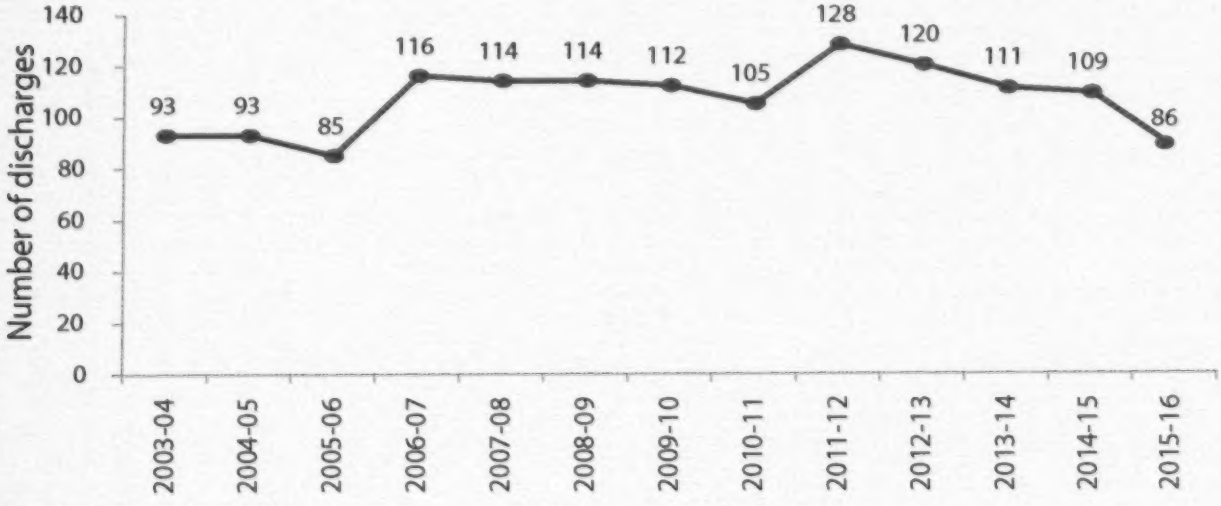
⇨ Parallel Growth Agreements allow a municipality with inadequate wastewater capacity to support further growth to proceed with new development at the same time as it expands its wastewater treatment capacity. Ten Parallel Growth Agreements have been completed and fully implemented for wastewater systems. An additional 14 Parallel Growth Agreements are in place and being implemented for wastewater systems and there is the potential for another seven agreements to be developed for wastewater systems in the future. Lampman and Carnduff have received extensions to complete lagoon upgrades / replacement.

### Planned Action: Implement an administration agreement with Environment Canada for the delivery of the federal Wastewater System Effluent Regulations in Saskatchewan

⇨ The agreement between WSA and Environment Canada was reached in July 2015 and implementation is currently underway.

## Performance Measures

**Number of Sewage Effluent Discharges that Represent a Risk to Source Waters**




*Source: Water Security Agency 2016*

The number of sewage effluent discharges that represent a risk to source waters is a direct indication of the current potential for source water contamination due to poor wastewater treatment, overloaded systems, or systems with failing infrastructure, etc. This measure is selected since it is the most direct measure of the number of potential significant contamination point sources affecting a range of water uses.

As of March 31, 2016, approximately 86 wastewater systems have been identified as having a discharge that may reach a surface water body and represent a risk to source waters under certain conditions.

Growth in Saskatchewan communities is also placing additional pressure on sewage infrastructure as some communities were at treatment and/or storage capacity. On an annual basis, Water Security Agency staff review the quality of effluent from each regulated sewage works. Reduction of ammonia and chlorine residual emissions within treated wastewater effluent, sewage works capacity or other treatment capability issues typically involve significant planning, investment and construction. Therefore, it can be expected that reductions in the number of works, which represent a risk to source waters, will be a time consuming process. Work to resolve problematic wastewater systems will continue for the foreseeable future.

## Government Goals

Sustaining growth and opportunities for Saskatchewan people

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Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure appropriate dam safety and public benefits from WSA infrastructure and lands

## Agency Goal: Safe and beneficial infrastructure and management

### Strategy - Ensure Water Security Agency infrastructure safely meets water supply and management needs

To ensure adequate water supply and public safety, dams must be of adequate standard and in good operating condition. The Water Security Agency has adopted the requirements of the Canadian Dam Association in this regard. WSA's dam safety program includes several components including dam safety reviews, rehabilitation of dams, preparing for emergencies with emergency preparedness and emergency response plans and developing operations and surveillance manuals.

#### Key Actions and Results

In 2015-16, WSA continued to implement its 10 Year Plan for Infrastructure Rehabilitation and Dam Safety. Emergency Response Plans are now in place for Rafferty, Alameda, Gardiner, and Qu'Appelle River dams. An independent dam safety review was completed at Rafferty and completion of the inflow design study is a major step in determining the required outlet capacity of Rafferty Dam.

#### Planned Action: Undertake conceptual design studies for increasing the outlet capacities at Rafferty and Alameda Dams

⇨ The Inflow Design Flood (IDF) selection study was completed and inflow design flood finalization is currently underway. This information will be used to determine the required outlet capacity.

#### Planned Action: Prepare and test emergency response plans, for Rafferty, Alameda, Gardiner, and Qu'Appelle River dams

⇨ Emergency Response Plans for Rafferty, Alameda, Gardiner, and Qu'Appelle River dams were prepared and issued to Plan Holders. A Directive for Emergency Action Plans was drafted and initial testing was completed. Updates, training, and testing will now be completed on an ongoing basis as guided by the Directive.

#### Planned Action: Prepare draft operation, maintenance and surveillance manuals for Rafferty, Alameda, Gardiner and Qu'Appelle River dams

⇨ Minimal work was completed on this action during the year.

#### Planned Action: Complete an independent dam safety review of Rafferty Dam

⇨ The dam safety review was completed and a detailed report was issued by the consultant. Recommendations have been incorporated into WSA's Dam Safety Issues tracking system.

#### Planned Action: Complete geotechnical assessments of Hugonard Dam

⇨ The geotechnical assessment of Hugonard Dam was completed. The results indicate the stability of the dam meets all Canadian Dam Association geotechnical and seismic criteria.

**Planned Action: Prepare a preliminary design for a replacement outlet control structure at Crooked Lake**

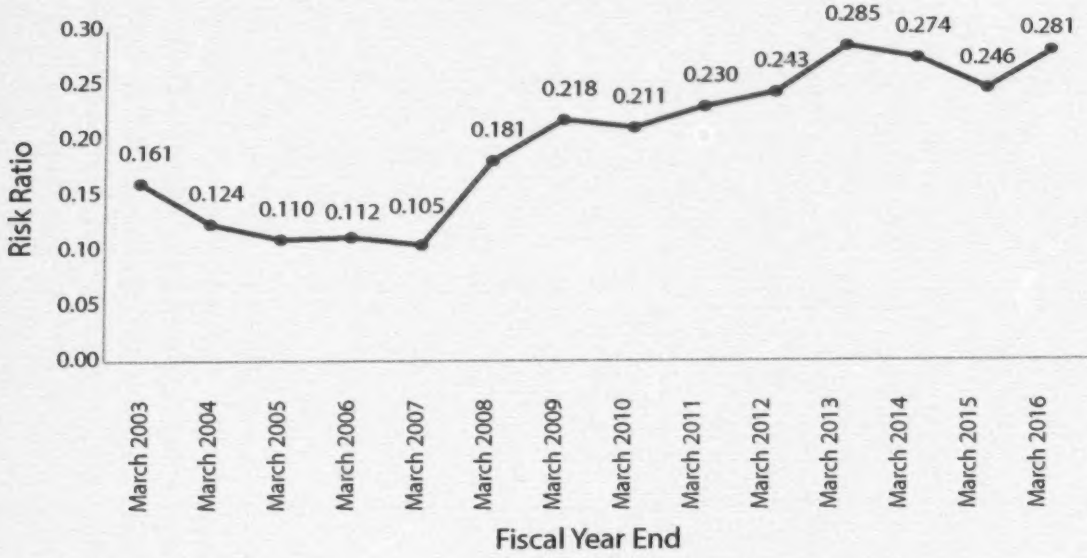
⇨ WSA consultant KCB is scheduled to complete the preliminary design by mid-year 2016, except for the environmental studies.

**Planned Action: Negotiate the transfer of federal water management infrastructure beneficial to the province**

⇨ Negotiations were initiated, then delayed, first by the federal election and election of a new federal government and then by the provincial election. As a result no dams were transferred during the year. Negotiations are continuing.

## Performance Measures

**Risk associated with Water Security Agency's dams**




*Source: Water Security Agency 2016*

This graph shows the risk associated with the Water Security Agency's dams by considering both the likelihood and the consequences of a dam failure. It is a measure of the safety of the dams and of progress in upgrading the dams to acceptable standards. A higher score indicates increased risk. The Water Security Agency uses the ratio of the assessed current risk to the total possible risk to establish targets and measure progress in reducing risk associated with its dams. Risk, defined as the probability of a failure multiplied by the consequences of a failure, has been assessed in relative values. The Assessed Current Risk is determined by multiplying the Failure Rating and the Consequence Rating for each structure.

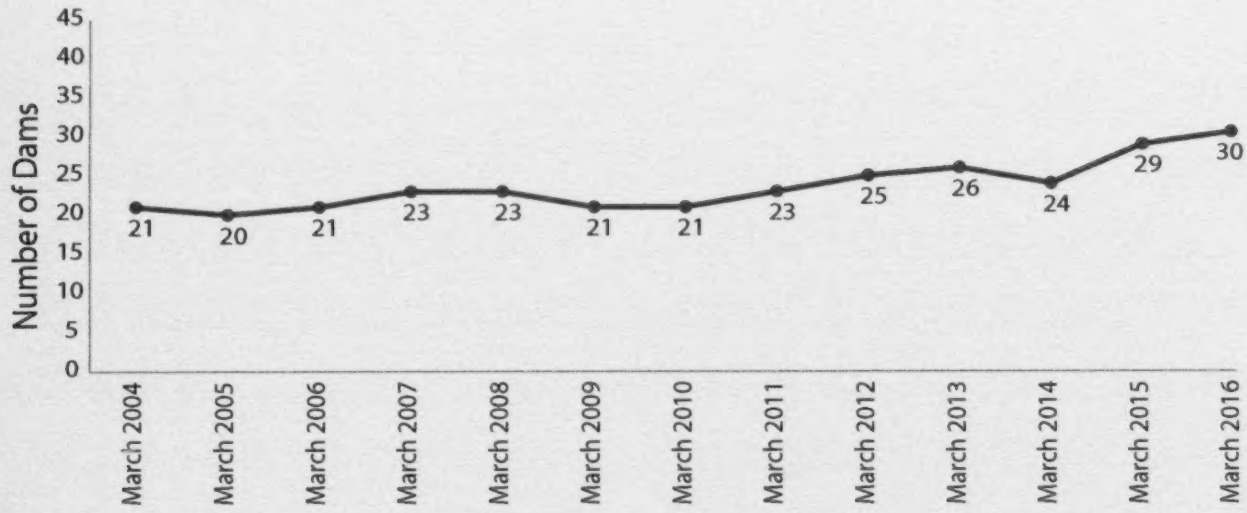
The information used to determine Failure Probability values comes from a variety of sources including: annual inspections; internal and external dam safety reviews; design and assessment studies; issue identification by site staff/project operators; and review of dam performance monitoring data. Consequence ratings are assessed for each structure and based upon an estimation of life safety, economic damages and restoration costs in the case of a failure. A lower ratio indicates safer infrastructure, with a ratio of zero indicating no current assessed risk.

Numerically the risk ratio can be expressed as:

Risk Ratio=Σ Assessed Current Risk / Σ Total Possible Risk.

The risk ratio increased in 2015-16, principally due to additional dam safety issues that were confirmed during Dam Safety Reviews completed for Rafferty and Alameda dams. Internal inspections and assessments also resulted in the Failure Probability increasing at a number of smaller and lower consequence dams owned by WSA. These new deficiencies more than offset the risk reduction that was realized through rehabilitation and maintenance efforts and favourable outcomes of dam safety inspections and assessments during the year. The dams remain safe to operate, but the risk index shows the priority areas where rehabilitation work is needed. Deficiencies at Rafferty and Alameda dams are the largest contributors to the increase in this metric and Water Security Agency is working to address these deficiencies.

**Number of dams requiring upgrades**




*Source: Water Security Agency 2016*

This measure quantifies the number of Water Security Agency dams which require upgrades to meet the provisions of the Dam Safety Guidelines (2007) published by the Canadian Dam Association. The Water Security Agency is responsible for the operation and maintenance of 49 dams and, like all provincial governments and major utilities across Canada, manages its works generally in accordance with these guidelines.

Depending upon the dam, a failure could have significant economic and safety consequences. However, unlike the risk ratio, this measure does not indicate the severity of the identified deficiencies. This measure is useful in gauging progress made over time to reduce the number of deficient dams.

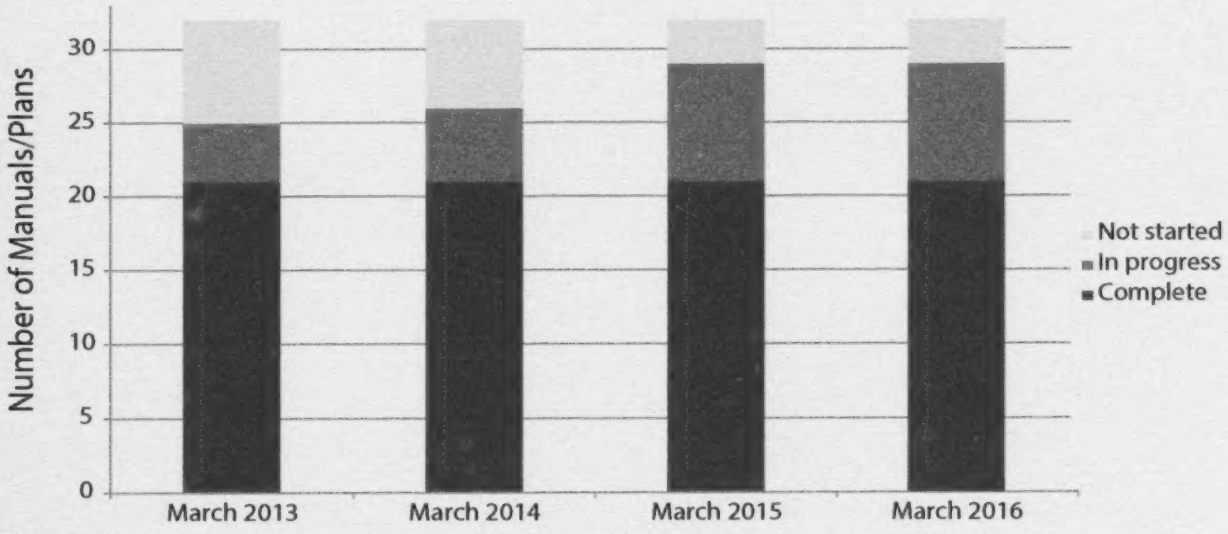
The Failure Probability of a Water Security Agency dam is assessed in terms of (a) hydrology/hydraulic, (b) geotechnical, and (c) structural/electrical/mechanical condition rating factors. These three rating factors vary from 0 (adequate) to 9 (grossly inadequate) for a maximum possible Failure Probability of 27.

A dam having at least one condition rating factor of three or greater is deemed to be a deficient dam. The information used to determine Failure Probability values comes from a variety of sources including: annual inspections; internal and external dam safety reviews; design and assessment studies; issue identification by site staff/project operators; and review of dam performance monitoring data.

During 2013-14 and 2014-15 Water Security Agency accepted transfer of 4 dams from the federal government with compensation for future costs. All four of these dams were deficient at the time of transfer. This is the major reason for the increase in this metric observed since 2014. In 2015-16, the number of dams requiring upgrades increased from 29 to 30. As a result of rehabilitation and maintenance efforts, the status of Broderick North and Lac la Ronge dams was changed to non-deficient. However, the status of two other dams, Craven and Esterhazy, was changed to deficient as a result of a few additional deficiencies that were identified during routine inspections and dam safety assessments. In addition, the condition of Echo Lake Dam, acquired from Agriculture and Agri-Food Canada in late 2014-15, was assessed as being deficient. As with the previous measure, this measure is of interest to the

government as the upgrading and safety of dams is fundamental to public safety and to dependable water supplies to support the economy.

**Status of required operation plans and project manuals for the Water Security Agency's four major dams**




*Source: Water Security Agency 2016*

This measure tracks the status of operation plans and project manuals required for the Water Security Agency's four major dams. As part of the original design and construction of the four major dams (Gardiner, Qu'Appelle River, Rafferty, and Alameda), operation and maintenance manuals were provided by the Engineer-of-Record to support the safe operation of the dams. However, given the aging infrastructure, changes in water management strategies and dam safety management principles and practices, thorough updates were considered necessary and several additional manuals were required. There are a total of 32 manuals and plans required for the four major dams, including:

- ⇨ Reservoir Operation Plans to describe how dams should be operated under different scenarios ranging from drought to flood conditions;
- ⇨ Operation & Maintenance Manuals to detail how to operate project facilities as well as what, how and when operation tests/evaluations and routine and preventative maintenance shall be undertaken;
- ⇨ Technical Maintenance Manuals to outline what systems exist to monitor/assess works performance and how and when performance monitoring is to be undertaken;
- ⇨ Operation, Maintenance, and Surveillance Manuals to provide a concise summary of the detailed manuals and plans noted above;

In 2015-16, work continued on the Reservoir Operating Plans for Lake Diefenbaker, Rafferty Reservoir and Alameda Reservoir as well as the Technical Maintenance Manuals for Gardiner Dam, Rafferty, Alameda and Qu'Appelle River dams. These documents range

from 50% to 90% complete.

## Government Goals

Sustaining growth and opportunities for Saskatchewan people | Meeting the challenges of growth | **Securing a better quality of life for all Saskatchewan people** | **Delivering responsive and responsible government**

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure effective planning, damage prevention and response measures are in place to address flooding, excess moisture, and drought

## Agency Goal: Prevention of damage from flooding, excess moisture & drought

### Strategy - Reduce risk of flood, drainage, and drought damages in the province

Floods, drought, and inappropriate/unorganized drainage can cause significant damage to property, infrastructure, and productivity within Saskatchewan. Reducing the risks associated with these events begins with understanding which areas within the province are most at risk and then reducing these risks through effective monitoring, regulation, infrastructure and education.

#### Key Actions and Results

In 2015-16, WSA developed and began implementing new drainage regulations as part of the Agricultural Water Management Strategy. Two pilot implement projects are the first step in bringing all drainage into compliance over a 10 year period. Learning from the pilot projects will guide implementation of the Agricultural Water Management Strategy in 2016-17.

#### Planned Action: Improve flood and drought forecasting tools

- ⇨ As a pilot project to improve forecasting, WSA worked on developing a Wascana Creek routing model, but it did not provide reliable or defendable results. Other work on this action was deferred as part of overall spending restraint.

#### Planned Action: Work toward development of a long-term flood damage prevention program

- ⇨ An inventory of communities at risk of flooding has been developed and a risk analysis methodology has been developed which will assess relative risk between communities. Work will continue on application of the risk analysis and planning for mitigation activities for approximately 100 flood prone communities including developing an application to the National Disaster Mitigation Fund.

#### Planned Action: Deliver the Emergency Flood Damage Reduction Program

- ⇨ The 2015 program was moderate in terms of the volume of files with 150 agreements being created to fund flood damage reduction works. Since the program's inception in 2011, 3,239 client files have been opened under this program.

#### Planned Action: Rip-rap berms at Fishing Lake to make them permanent and cost share annual maintenance on the berms with the Fishing Lake Watershed Association

- ⇨ Fishing Lake Flood protection berms have been completed and transferred to the Fishing Lake Watershed Association.

#### Planned Action: Continue to examine alternatives to reduce natural runoff into dead end basins like the Quill lakes and Manitou Lake

- ⇨ WSA engaged KGS Group to examine a wide range of options to reduce runoff into the Quill Lakes. At year end work

was progressing well with information expected to be compiled during the spring.

### Planned Action: Develop new drainage regulations

- ⇨ New drainage regulations were developed and approved as the first step in a phased in approach to bring all drainage in the province into compliance over the next ten years.
- ⇨ Two pilot projects implementing the regulations were conducted in 2015-16 and phased implementation will proceed in 2016-17.

### Planned Action: Implement with partners, wetland restoration programming to achieve biological and flood control objectives (National Wetland Conservation Fund project)

- ⇨ Two hundred acres of wetland were restored through agreements with landowners. This project will continue in 2016-2017.

### Planned Action: Collaborate with federal government to implement SaskAlert system

- ⇨ Water Security Agency is now able to use the SaskAlert system to alert the public in case of a flood or other emergency.

## Government Goals

Sustaining growth and opportunities for Saskatchewan people
Meeting the challenges of growth
Securing a better quality of life for all Saskatchewan people
Delivering responsive and responsible government

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: collect, manage, and share the data, information and knowledge required to support good decisions

## Agency Goal: Adequate data, information & knowledge

## Strategy - Ensure adequate water information is available to support decision making

Understanding basic information about our water resources, including current and projected demands and availability, as well as ecosystem needs, is a critical foundation for water management decision making.

### Key Actions and Results

In 2015-16, WSA implemented a location based platform to present water information. The first data set, water wells, is expected to be available in the second quarter of 2016 and the platform is expected to work well for additional data sets.

### Planned Action: Implement a new location-based IT framework to enable improved visualization, management and sharing of data, information and knowledge within the WSA and with clients

- ⇨ WSA implemented a location based platform in 2015-16 which will be used to make geographically based water information available on the WSA website. It is expected that the public on-line Water Wells application will be upgraded to the location based platform and publicly available by the end of May 2016.

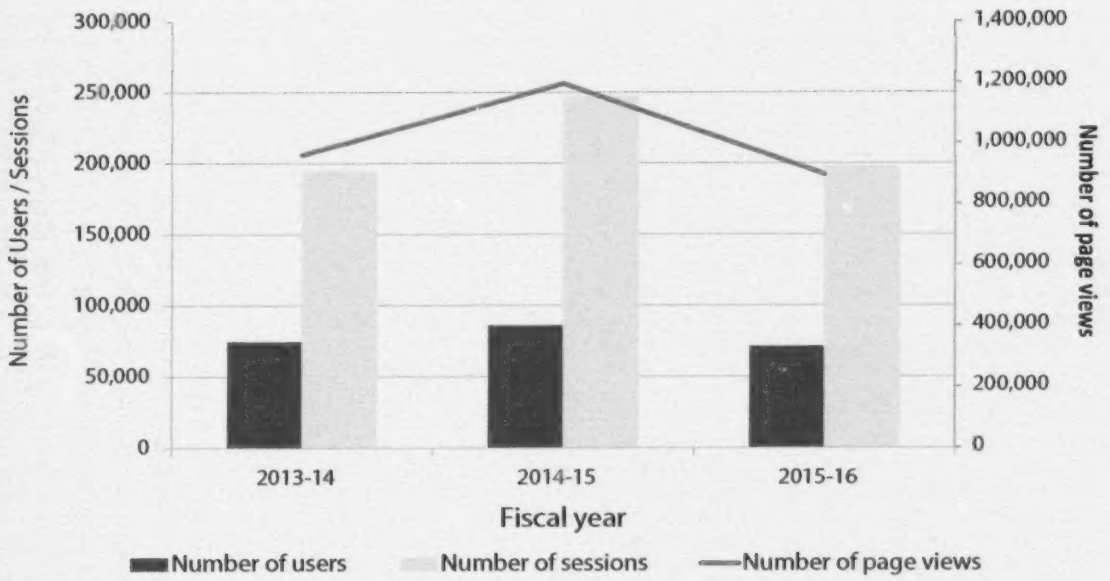
### Planned Action: Complete Reports on the State of Pasqua and Crooked Lakes

- ⇨ Desktop analysis of environmental datasets has been completed for all sites except Cowessess. Preparations for the field study are underway. First Nations engagement contract is almost ready for signature, and work will begin shortly

thereafter. Completion of the project (not including Cowessess) is anticipated by Fall 2016.

## Performance Measures

**Water Security Agency Website Use**

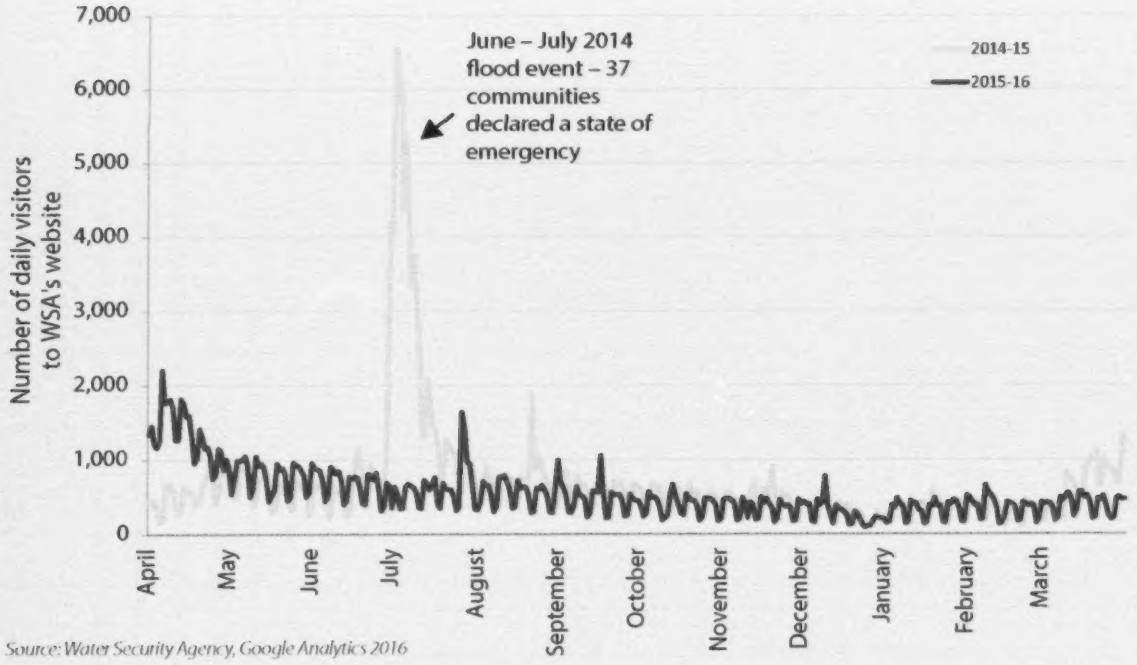



*Source: Water Security Agency, Google Analytics 2016*

Since 2013, the Water Security has been monitoring website traffic patterns using Google Analytics. Google Analytics provides information about the number of visitors to the website and the number of pages these visitors have viewed. WSA also uses web analytics to measure trends in daily use and to determine which webpages have the most views. All of this information is useful for the WSA to ensure that information provided is useful and timely.

**How many people visited WSA's website?**

In 2013-14, just over 74,000 visitors used the WSA's website, compared to almost 86,000 in 2014-15, and just over 71,000 in 2015-16. Traffic to the website decreased by 20% from 2014-15 to 2015-16. The use of WSA's website increases significantly when Saskatchewan experiences high water/rainfall events. During the large flood event in Eastern Saskatchewan in late June to early July of 2014, web visits increased by 54,000 sessions in a 19 day period (June 29 to July 19, 2014) compared to the same dates in 2015 and this largely explains the higher number sessions in 2014-15.




*Source: Water Security Agency, Google Analytics 2016*

This information shows that the WSA website has steady use by people accessing information from a number of web pages, with the stream flow page being the most heavily used. Many visitors are regular users who have bookmarked the site. This helps WSA understand which data sets are most important to add to improve our service to the public. The data shows that the site is a very important source of information during an emergency and highlights the importance of keeping information on the website up to date during an emergency and ensuring that it is easily accessible from mobile devices.

**Returning visitors**

In 2013-14, 62% of the visitors were returning users compared to 67% in both 2014-15 and 2015-16. The increase in the percentage of return visitors between 2013-14 and 2015-16 indicates that people are coming back to the website because they view it as a valuable resource containing information that is useful to them.

**How engaged were these website users?**

- Users spent on average 3 minutes in 2014-15 and 2.3 minutes in 2015-16 on the website per visit. The decline in the time spent on the website in 2015-16 may suggest that there are regular users that are more familiar with navigating the website.
- In 2014-15, the average visitor looked at 4.8 pages and stayed almost 3 minutes. In 2015-16, the average user looked at 4.5 pages and stayed 2.3 minutes, 14% less time on the website.

**What were visitors most interested in viewing?**

- About 18% of the total page views on WSA's website were of the Streamflows and Lake Levels webpage. This indicates to us that citizens are making good use of all the hydrometric data that WSA collects and provides.

**Where do these visitors come from?**

- Ninety-five percent of users are from within Canada.
- At least 37% of website traffic comes from return users who accessed the website (www.wsask.ca) using a bookmark.
- Approximately 40% of website sessions are generated by a mobile device, either mobile phone (25%) or tablets (14%).

## Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

**Securing a better quality of life for all Saskatchewan people**

**Delivering responsive and responsible government**

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure water management and decision making processes are coordinated, comprehensive and collaborative

## Agency Goal: Effective water governance and engagement

### Strategy - Engage and inform stakeholders and the public regarding water issues

Engaging citizens and communities improves water management decisions. Local interests and perspectives are important considerations in decision making.

#### Key Actions and Results

In 2015-16, WSA made significant steps in updating its regulations with new drainage regulations and repeal of The Reservoir Development Area Regulations. Partnerships with neighbouring jurisdictions were strengthened with revision of water quality objectives under the Prairie Provinces Water Board and a new Memorandum of Understanding with Manitoba.

#### Planned Action: Continue development work on new, comprehensive water legislation while proceeding with water management regulations related to drainage

- In 2015-16, three regulations, *The Reservoir Development Area Regulations, The Recreation (Residential) District Building Regulations,* and *The Drainage Control Regulations* were repealed and *The Saskatchewan Watershed Authority Regulations* were revised as The Water Security Agency Regulations. Work is proceeding on new legislation with consultations planned for 2016-17.

#### Planned Action: Continue to negotiate bilateral agreements to fulfill the obligations of the Mackenzie River Basin Transboundary Waters Master Agreement

- Work is progressing on both the Alberta and Northwest Territories bilateral agreements, and will extend into fiscal 2016-17.

#### Planned Action: Complete work with Manitoba, Alberta and Canada to amend the Prairie Provinces Water Board Master Agreement on Apportionment to revise the boundary water quality objectives, and continue negotiations to develop a groundwater schedule to provide for the effective management of this interprovincial resource

- The first comprehensive review and update of the Master Agreement's (MAA) water quality objectives since they were put in place in 1992 was completed when the 2015 interprovincial water quality objectives were ratified on July 8, 2015 and came into effect on that date. There are now 71 interprovincial water quality objectives for water quality parameters, including nutrients, metals, major ions, physical characteristics, pesticides and radioisotopes for 6 transboundary rivers that cross from Alberta to Saskatchewan and 6 transboundary rivers that cross from Saskatchewan to Manitoba.

#### Planned Action: Review, with the United States and the State of North Dakota and through consultations with the International Souris River Board, the Canada-United States Agreement for Water Supply and Flood Control in the Souris River Basin

- The review and consultation of the Canada-United States Agreement for Water Supply and Flood Control in the Souris River Basin is ongoing. Canada has provided funding for the Souris River Plan of Study, and the International Joint Commission along with the International Souris River Board are in the process of defining how the study will be executed.

**Planned Action: Develop Reservoir Regulation Manuals for Rafferty and Alameda in consultation with the United States and the State of North Dakota**

- ⇨ Inflow design flood study has been completed and will be followed by the drafting of the reservoir operating plan and the solicitation of US feedback.

**Planned Action: Continue to work to improve communication and governance mechanisms with the province of Manitoba on water management issues**

- ⇨ A Memorandum of Understanding, which is intended to improve communication and cooperation between provinces, was signed by responsible Ministers in Manitoba and Saskatchewan and is being implemented.

**Planned Action: Build capacity to implement the Duty to Consult in accordance with provincial direction and law**

- ⇨ WSA changed its internal process to implement the Duty to Consult to a system where the Duty to Consult manager initiates the consultation process. When required the Duty to Consultant manager will involve other staff with technical knowledge of the project. This will build capacity by enabling new staff to lead the consultation process for that project and future projects.

**Planned Action: Support a Provincial Water Council with sector-based representation**

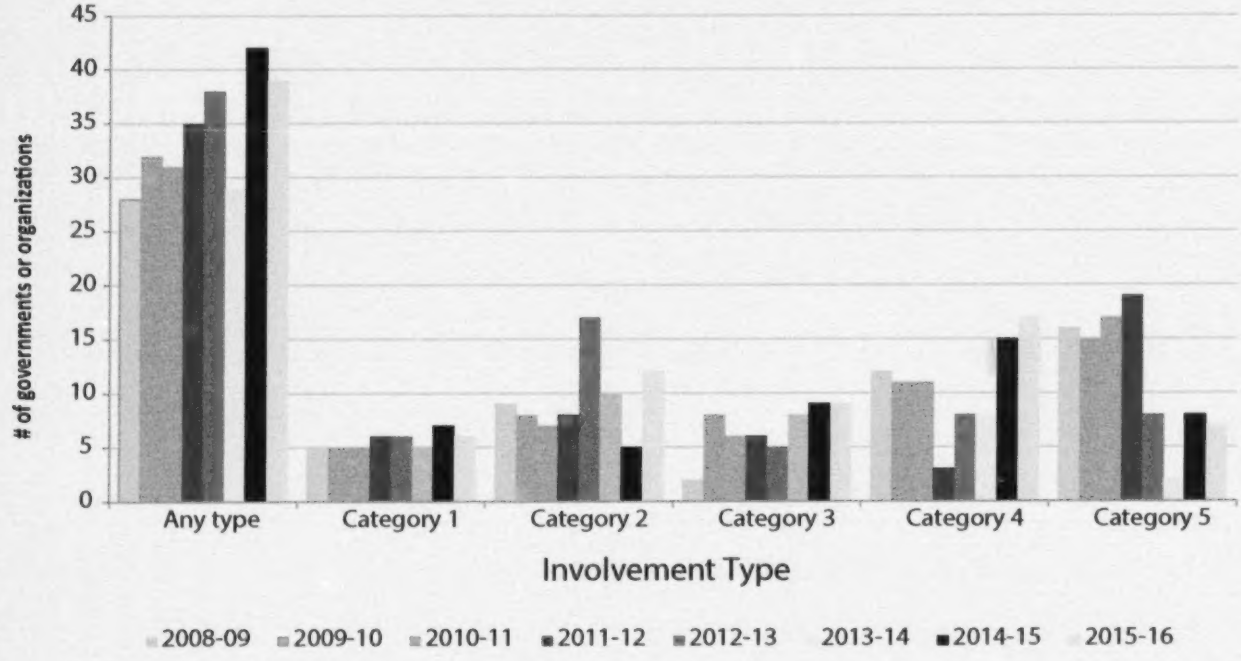
- ⇨ A water council has not been created. WSA is instead moving to a policy of meeting with groups in each sector.

**Planned Action: Create the Crooked and Pasqua Lake Water Management Boards**

- ⇨ WSA has named its directors for these water management boards and has been working directly with Pasqua and Muscowpetung First Nations to form the Pasqua Lake WMA Board. WSA and Sakimay First Nations are still waiting on Cowessess First Nation to confirm their intent to join the Crooked Lake WMA Board. Cowessess First Nation has just recently elected a new chief and a number of new councilors. As such, WSA will contact the new chief to initiate the process.

## Performance Measures

**Number of First Nations and Métis governments or organizations with whom the Water Security Agency is involved**




*Source: Water Security Agency 2016*

First Nation and Métis interest in water availability and quality continues to grow and may result in conflicts over use, especially in areas with water shortages. Proactive relationship building will help reduce future conflicts and contribute toward positive water management alliances. The number of organizations and / or government bodies with whom the Water Security Agency, at a minimum, has a two-way dialogue, is a simple measure of the Water Security Agency efforts to build relationships. While some relationships, such as formal duty to consult reported as category 2, are legal requirements, others such as those reported in categories 4 and 5 show Water Security Agency working to build relationships. Water Security Agency staff report this information on an annual basis, and the comprehensive results are summarized here.

For this measure, the total number of governments or organizations with whom the Water Security Agency is directly involved is presented, along with a breakdown according to categories of involvement, as follows:

Any type: This is the total number of First Nations and Métis communities or organizations the Water Security Agency is involved with in any of the categories. The Water Security Agency may have more than one category of involvement with any given community or organization; therefore, this does not represent a sum of the five broken-out categories.

**Category 1.** This includes formal Province – First Nations / Métis agreements or negotiations discussions underway or agreement in place

**Category 2.** This includes formal consultations (activities specific to legal duty to consult requirements)

**Category 3.** This includes advisory board or committee participation such as representation on Water Security Agency planning or advisory committees

**Category 4.** This includes community-based projects / initiatives: preliminary discussions, under development or already in place

**Category 5.** This includes information exchange and relationship-building, such as informal discussions with community / organization representatives, and feedback received about Water Security Agency initiatives

The 2015-16 measurement results indicate the Watershed Authority is directly involved with 39 First Nations and Métis governments or organizations.

## Government Goals

Sustaining growth and opportunities for Saskatchewan people
Meeting the challenges of growth
Securing a better quality of life for all Saskatchewan people
Delivering responsive and responsible government

Strategic priorities from the Saskatchewan Plan for Growth and The 25 Year Saskatchewan Water Security Plan: ensure our organizational culture and practices support service excellence, innovation, collaboration, safety, and accountability

## Agency Goal: Organizational excellence

### Strategy - Engage and inform stakeholders and the public regarding water issues

Engaging citizens and communities improves water management decisions. Local interests and perspectives are important considerations in decision making and engaging and informing citizens and local authorities improves

#### Key Actions and Results

#### Planned Action: Continue to conduct Lean initiatives and program reviews and implement recommended improvements in efficiency and effectiveness

⇨ WSA is committed to continuous improvement and used Lean and program review to continuously improve programs and services during the year.

#### Planned Action: Gather information on client satisfaction and identify and implement changes to prove service where necessary

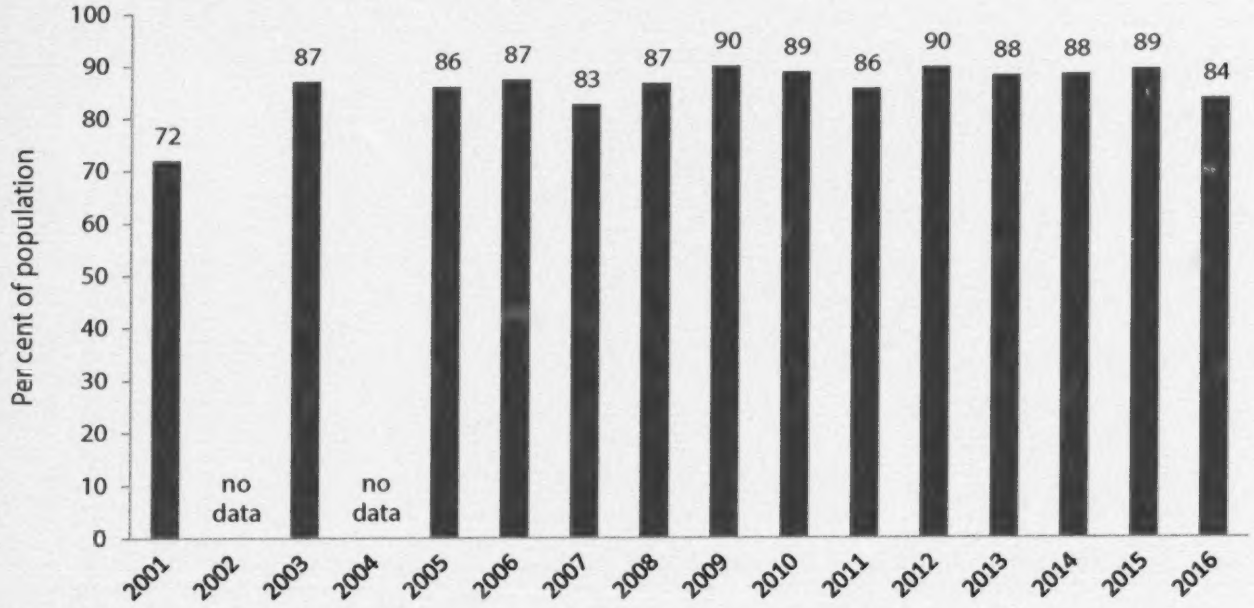
⇨ This action item has been deferred until next year.

**Planned Action: Continue to implement the Culture Sustainment Plan to enhance internal communications, employee recognition, and instill our commitment to excellence**

- ⇨ In 2015-16, WSA has taken a number of actions to implement the Culture Sustainment Plan and encourage organizational excellence. The new employee newsletter features stories about people and work from across the organization as well as regular messages from the President and has been very popular.
- ⇨ The Culture Committee met periodically and continued to advance several initiatives. Executive management Team (EMT) met with Public Service Commission Culture Champions in an effort to enhance One Team across Government. The Annual Culture Awards and the President's Award were presented to four deserving individuals and one team, at a special event, which was recorded and posted on the intranet.
- ⇨ New employee orientations are more encompassing and employees are introduced to the corporation by their managers as well as through more personal introductions in the newsletter.

## Performance Measure

**Drinking Water Quality Satisfaction**




*Source: Water Security Agency Polling Results, 2016*

The Drinking Water Quality Satisfaction indicator is based on the results of annual polling of Saskatchewan residents on their level of confidence in the quality of their drinking water supply. The measure is the percentage of respondents who indicated that they are very or somewhat confident in the quality of their tap water. This indicator reflects upon the success of the Water Security Agency in advancing safe drinking water supplies across the province including the municipalities, pipelines and large commercial water systems.

The drinking water quality satisfaction indicator has been greater than 80 per cent since 2003 and remains high.

Ongoing attention to actions such as consumer education efforts, waterworks inspections, media coverage of water contamination events affecting larger centres, implementation of water quality standards, water workshops and consumer notification will help to maintain a high level of public confidence in the safety of drinking water in the future.

Key risks to achieving this measure include: lack of public knowledge about the effectiveness of drinking water quality compliance requirements and efforts; major climatic events that impact base survey water quality and quantity (such as sustained droughts or major flooding); and upsets or significant problems at a waterworks for a major centre in or beyond the province that may influence the confidence of a significant portion of population in Saskatchewan. There is also some risk in how the survey is constructed (for instance, the order in which questions are asked and the possibility that other topics covered in the survey might influence the respondents' answers).

# 2015-16 Financial Overview

Water Security Agency operations resulted in a $2.9 million deficit, this year.

Revenues were $111.3 million under budget. A budgeted, one-time, $108.3 million payment from Agriculture and Agri-Food Canada, related to the transfer of water control structures to Water Security Agency, did not occur as Federal and Provincial elections delayed negotiations. In addition, water power revenue was $2.6 million under budget due to a dry spring and summer.

Expenses for regular operations, at $38.7 million, were $7.8 million below budget. Enforcement costs were lower than budgeted and staff vacancies during the year resulted in lower salary costs, as well as reduced program activities and related costs. Vacancies and reductions in expenses were driven by restraints due to anticipated lower revenues in the year.

In previous years, the Water Security Agency was provided $67 million in Emergency Flood Damage Reduction Program funding, of which $7.4 million remained at March 31, 2015. These remaining funds covered the $3.1 million over budget Emergency Flood Damage Reduction Program expenditures in 2015-16.

**Management's Responsibility for the Financial Statements**

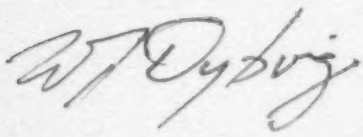
The accompanying financial statements are the responsibility of the management of the Water Security Agency. Management maintains a system of accounting and administrative controls to ensure that accurate and reliable financial statements are prepared and to obtain reasonable assurance that transactions are authorized, assets are safeguarded, and financial records are maintained.

These statements have been prepared in accordance with Canadian public sector accounting standards, using management's best estimates and judgement when appropriate.

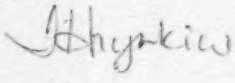
The Water Security Agency's external auditor, Deloitte LLP, expresses an independent opinion on these statements. Their report provides the scope of their audit and states their opinion.

The Water Security Agency Board has approved these financial statements. The Annual Report, which includes these financial statements, is tabled in the Legislative Assembly.

On behalf of the Water Security Agency



Wayne Dybvig
President



Irene Hrynkiw
Executive Director, Corporate Services

# WATER SECURITY AGENCY

# FINANCIAL STATEMENTS

***March 31, 2016***

Deloitte.

Deloitte LLP
2103 - 11th Avenue
Mezzanine Level
Bank of Montreal Building
Regina, SK S4P 3Z8
Canada

Tel: 306-565-5200
Fax: 306-757-4753
www.deloitte.ca

## INDEPENDENT AUDITOR'S REPORT

To the Members of the Legislative Assembly
Province of Saskatchewan

We have audited the accompanying financial statements of the Water Security Agency, which comprise the statement of financial position as at March 31, 2016, and the statements of operations and accumulated surplus, change in net financial assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

**Management's Responsibility for the Financial Statements**
Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's Responsibility**
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**
In our opinion, the financial statements present fairly, in all material respects, the financial position of the Water Security Agency as at March 31, 2016, and the results of its operations, changes in its net assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Deloitte LLP

Chartered Professional Accountants, Chartered Accountants
Licensed Professional Accountants

May 26, 2016
Regina, Saskatchewan

Statement 1

## WATER SECURITY AGENCY

## STATEMENT OF FINANCIAL POSITION
## AS AT MARCH 31
## ($ thousands)

| | 2016 | 2015 |
|---|---|---|
| **FINANCIAL ASSETS** | | |
| Cash | $ 98,661 | $ 85,396 |
| Accounts receivable | 8,909 | 22,384 |
| | 107,570 | 107,780 |
| **LIABILITIES** | | |
| Accounts payable and accrued liabilities | 7,011 | 9,385 |
| Deferred revenue (Note 5) | 392 | - |
| Employee future benefits (Note 6) | 997 | 1,052 |
| Long-term debt (Note 7) | 47,678 | 33,235 |
| | 56,078 | 43,672 |
| **NET FINANCIAL ASSETS** | 51,492 | 64,108 |
| **NON-FINANCIAL ASSETS** | | |
| Tangible capital assets (Note 8) | 331,781 | 322,020 |
| Prepaid expenses and supplies | 193 | 314 |
| | 331,974 | 322,334 |
| **ACCUMULATED SURPLUS** | $ 383,466 | $ 386,442 |

Commitments and Contingencies (Note 10)

See accompanying notes

On behalf of the Board:

Director

# WATER SECURITY AGENCY

## STATEMENT OF OPERATIONS AND ACCUMULATED SURPLUS
## YEAR ENDED MARCH 31
## ($ thousands)

| | 2016 Budget (Note 13) | 2016 Actual | 2015 Actual |
|---|---|---|---|
| **REVENUE** | | | |
| Government of Saskatchewan | | | |
| - General Revenue Fund | $ 18,477 | $ 18,477 | $ 17,544 |
| - Fish and Wildlife Development Fund | 300 | - | - |
| Federal government transfer funds (Note 14) | 108,300 | - | 11,750 |
| Water revenue | 22,922 | 19,908 | 26,086 |
| Contract revenue (Schedule 1) | 695 | 712 | 524 |
| Other | 2,175 | 2,436 | 3,035 |
| | 152,869 | 41,533 | 58,939 |
| **EXPENSES (Schedule 2)** | | | |
| Corporate services | 4,798 | 2,514 | 3,149 |
| Legal, regulatory and aboriginal affairs | 2,010 | 1,187 | 1,218 |
| Water use and licensing | 1,128 | 1,011 | 968 |
| Strategic integration and administration | 1,961 | 2,125 | 1,889 |
| Regional services | 6,743 | 5,455 | 5,534 |
| Watershed planning and implementation | 1,932 | 1,213 | 1,474 |
| Infrastructure management - engineering and dam safety | 6,901 | 7,142 | 5,352 |
| Hydrology and groundwater services | 3,403 | 3,395 | 3,141 |
| Drinking water and wastewater management | 6,939 | 4,947 | 5,183 |
| Water quality services | 3,403 | 3,457 | 3,203 |
| Interest | 1,881 | 1,151 | 802 |
| Amortization of tangible capital assets | 5,426 | 5,121 | 4,912 |
| | 46,525 | 38,718 | 36,825 |
| **Surplus for the year, before the following** | 106,344 | 2,815 | 22,114 |
| Revenue related to flood relief projects (Note 4) | 2,000 | 3,359 | 698 |
| Expenses related to flood relief projects (Note 4) | 4,800 | 9,150 | 13,157 |
| **Deficit related to flood relief projects** | (2,800) | (5,791) | (12,459) |
| **Surplus (deficit) for the year** | 103,544 | (2,976) | 9,655 |
| **Accumulated surplus – beginning of year** | 386,442 | 386,442 | 376,787 |
| **Accumulated surplus – end of year** | $ 489,986 | $ 383,466 | $ 386,442 |

See accompanying notes

## WATER SECURITY AGENCY

## STATEMENT OF CHANGE IN NET FINANCIAL ASSETS
## YEAR ENDED MARCH 31
## ($ thousands)

| | 2016 | | 2015 |
|---|---|---|---|
| | Budget (Note 13) | Actual | Actual |
| **Surplus (deficit) for the year** | $ 103,544 | $ (2,976) | $ 9,655 |
| Acquisition of tangible capital assets | (18,300) | (14,885) | (12,986) |
| Amortization of tangible capital assets | 5,426 | 5,121 | 4,912 |
| Gain on sale of tangible capital assets | - | - | (7) |
| Proceeds on sale of tangible capital assets | - | 3 | 7 |
| | 90,670 | (12,737) | 1,581 |
| Net consumption of prepaid expenses and supplies | - | 121 | 49 |
| **Increase (decrease) in net financial assets** | 90,670 | (12,616) | 1,630 |
| **Net financial assets – beginning of year** | 64,108 | 64,108 | 62,478 |
| **Net financial assets – end of year** | $ 154,778 | $ 51,492 | $ 64,108 |

See accompanying notes

## WATER SECURITY AGENCY

## STATEMENT OF CASH FLOWS
## YEAR ENDED MARCH 31
## ($ thousands)

| | 2016 | 2015 |
|---|---|---|
| **CASH PROVIDED BY (USED IN)** | | |
| **OPERATING ACTIVITIES:** | | |
| Surplus (deficit) for the year | $ (2,976) | $ 9,655 |
| Items not affecting cash: | | |
| Amortization of tangible capital assets | 5,121 | 4,912 |
| Gain on sale of tangible capital assets | - | (7) |
| Net change in non-cash balances relating to operations: | | |
| Accounts receivable | 13,475 | (13,007) |
| Prepaid expenses and supplies | 121 | 49 |
| Accounts payable and accrued liabilities | (2,374) | (1,300) |
| Employee future benefits | (55) | 38 |
| Deferred revenue | 392 | (92) |
| | 13,704 | 248 |
| **CAPITAL ACTIVITIES:** | | |
| Acquisition of tangible capital assets | (14,885) | (12,986) |
| Proceeds on sale of tangible capital assets | 3 | 7 |
| | (14,882) | (12,979) |
| **FINANCING ACTIVITIES:** | | |
| Proceeds from loan payable | 18,300 | 15,565 |
| Principal portion of loan repaid in year | (3,857) | (2,484) |
| | 14,443 | 13,081 |
| **Increase in cash, during the year** | 13,265 | 350 |
| **Cash – beginning of year** | 85,396 | 85,046 |
| **Cash – end of year** | $ 98,661 | $ 85,396 |

See accompanying notes

## 1. STATUS OF THE WATER SECURITY AGENCY

The Water Security Agency (WSA), which was originally established as the Saskatchewan Watershed Authority on October 1, 2002, was continued under the **Water Security Agency Act,** on October 1, 2012. It is a Treasury Board Crown corporation within the meaning of **The Crown Corporations Act, 1993**.

WSA is mandated to integrate all aspects of provincial water management to ensure water supplies support economic growth, quality of life and environmental well being. WSA supports protection of drinking water, flood and drought response, and management of water supplies, water quality and aquatic habitat. WSA owns and operates provincial dams and water supply channels.

## 2. SIGNIFICANT ACCOUNTING POLICIES

These financial statements have been prepared in accordance with Canadian public sector accounting standards. The following accounting standards are considered to be significant:

**Tangible Capital Assets**
Tangible capital assets are recorded at cost. Internally provided engineering and technical services are capitalized at charge out rates designed to recover salaries, benefits and overhead. The objective of this policy is to recognize the approximate value of design, supervision and administrative services rendered by WSA employees on construction projects. As well, WSA capitalizes interest expense on debt relating to specific construction projects. Amortization of assets under development will commence once they are operational and available for use. Water infrastructure assets include land and earthen dams, which are not amortized because they do not degrade over time, if adequately maintained. Charges for amortization are calculated at the following annual rates:

| Tangible Capital Assets | Method | Rate |
|---|---|---|
| Buildings | straight-line | 4% |
| Leasehold improvements | straight-line over term of lease | |
| Maintenance equipment | diminishing balance or straight-line, as appropriate | 15% to 30% |
| Office equipment | straight-line | 10% to 50% |
| Water infrastructure | straight-line | 1.67% to 20% |

**Government of Saskatchewan Grants**
Under the authority of **The Water Security Agency Act,** WSA receives grants from the General Revenue Fund out of monies appropriated by the legislature or authorized by Order in Council. These grants are recorded as revenue when received or receivable and are used to fund grant programs, water management infrastructure rehabilitation and operations.

## 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

**Revenue Recognition**

Contractual revenue received by WSA for specific purposes is recognized as revenue in the year in which the related expenses are incurred. Water revenue is recognized as revenue in the year it is consumed. Other revenue includes: licenses, fees, permits, interest income and a service contract with SaskWater. These revenues are recognized in the year they are earned.

**Grants to Clients**

Grants provided to clients for a variety of programs are recorded as an expense to WSA, when any eligibility criteria have been met and final approval for the grant payment is made. Where WSA enters into contractual agreements for project construction under various assistance programs, expenses are accounted for on an accrual basis.

**Employee Future Benefits**

WSA administers a benefit relating to a retirement allowance which is paid to eligible employees upon retirement. WSA has adopted the accrual method of accounting for this benefit whereby the cost of providing the benefits is recorded when the related services of employees are performed. WSA's employees participate in the Public Employees Pension Plan which is a multi-employer plan. WSA's contibutions to the pension plan are expensed as incurred.

**Measurement Uncertainty**

The preparation of financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenditures during the reporting period. Significant areas requiring the use of management estimates relate to the useful lives of assets for amortization periods and employee future benefits.

**Financial Instruments**

All financial instruments are initially recognized at fair value. The fair value of a financial instrument is the amount of consideration that would be agreed upon in an arm's-length transaction between knowledgeable, willing parties who are under no compulsion to act. The carrying amounts of these instruments approximates fair value due to their short-term nature.

**Remeasurement Gains and Losses**

These financial statements do not include a Statement of Remeasurement Gains and Losses as WSA has had no gains or losses due to remeasurement.

## 3. NEW STANDARDS AND AMENDMENTS TO STANDARDS

A number of new standards and amendments to standards which may impact the Agency are not yet effective for the year ended March 31, 2016, and have not been applied in preparing these financial statements.

The following new standards and amendments to standards are effective for financial statements on or after January 1, 2017:

- Introduction to public sector accounting standards

The following new standards and amendments to standards are effective for financial statements on or after April 1, 2017:

- PS 2200 Related party disclosures
- PS 3420 Inter-entity transactions
- PS 3210 Assets
- PS 3320 Contingent Assets
- PS 3380 Contractual Rights

The following new standard is effective for financial statements on or after April 1, 2018:

- PS 3430 Restructurings

The extent of the impact on adoption of these standards is not known at this time.

## 4. FLOOD RELIEF PROJECTS

In 2011, an "Emergency Flood Damage Reduction Program" (EFDRP) was implemented by the Province to provide, on a cost-shared basis, funding to assist individuals and communities with flood preparation. WSA was allocated the funds to lead this program on behalf of the Province and flooding issues have been ongoing. In fiscal 2016, $2 million was provided fom the General Revenue Fund for the 2015 flood program. WSA is reimbursed by Aboriginal Affairs and Northern Development Canada (AANDC) for assistance provided to First Nations to combat flood damage. WSA is also leading the work, on behalf of the Province, related to long-term solutions to flooding at Fishing and Waldsea Lakes.

WSA recognized the following funding for flood relief initiatives:

| | 2016 | 2015 |
|---|---|---|
| General Revenue Fund - Emergency Flood Damage Reduction | $ 2,000 | $ - |
| Aboriginal Affairs and Northern Development Canada | 1,359 | 698 |
| | $ 3,359 | $ 698 |

WSA recognized the following expenses for flood relief initiatives:

| | 2016 | 2015 |
|---|---|---|
| Emergency Flood Damage Reduction Program | $ 5,061 | $ 10,955 |
| Fishing and Waldsea Lakes | 2,994 | 1,609 |
| Aboriginal Affairs and Northern Development Canada | 1,095 | 593 |
| | $ 9,150 | $ 13,157 |

## 5. DEFERRED REVENUE

| | 2016 | 2015 |
|---|---|---|
| Balance, beginning of year | $ - | $ 92 |
| Fees collected | 392 | - |
| Recognition of prior year deferred revenue | - | (92) |
| Balance, end of year | $ 392 | $ - |

## 6. EMPLOYEE FUTURE BENEFITS

The amounts related to the defined benefit retiring allowance are as follows:

| | 2016 | 2015 |
|---|---|---|
| Accrued benefit liability | $ 997 | $ 1,052 |
| Benefits paid during the year | $ 145 | $ 108 |
| Net expense | $ 91 | $ 146 |

The significant actuarial assumptions adopted in measuring WSA's accrued benefit liability at March 31 are:

| | 2016 | 2015 |
|---|---|---|
| Discount rate | 3.20% | 2.90% |
| Inflation rate | 2.50% | 2.50% |
| Salary increase | 2.00% | 2.00% |
| Average remaining service life | 11.0 years | 10.8 years |

For 2015 and 2016, the mortality assumption is based on the 2014 Canadian Pensioner Mortality Table (CPM2014) using the CPM Improvement Scale B, for the private sector without size adjustment factors. A comprehensive study suggested that the private sector table better reflected actual experience than the public sector table, for large public service pension plans in Saskatchewan.

## 7. LONG-TERM DEBT

| | 2016 | 2015 |
|---|---|---|
| Conexus Credit Union 2006 - ten year loan bearing interest at 3.98% per annum, due March, 2021 | $ 1,484 | $ 1,747 |
| Bank of Montreal - ten year loan bearing interest at 3.40% per annum, due March, 2022 | 2,634 | 3,024 |
| TD Commercial Banking - ten year loan bearing interest at 2.65%, due November, 2022 | 4,656 | 5,286 |
| National Bank of Canada - ten year loan bearing interest at 3.51%, due December, 2023 | 7,260 | 8,071 |
| Bank of Montreal - ten year loan bearing interest at 3.03% per annum, due December, 2024 | 13,741 | 15,107 |
| TD Commercial Banking - ten year loan bearing interest at 2.69%, due November, 2025 | 17,903 | - |
| Total Debt | $ 47,678 | $ 33,235 |

Long-term debt repayments in each of the next five years are as follows:

| | |
|---|---|
| 2016 | $ 5,200 |
| 2017 | 5,360 |
| 2018 | 5,525 |
| 2019 | 5,695 |
| 2020 | 5,871 |
| Thereafter | 20,027 |
| | $ 47,678 |

## 8. TANGIBLE CAPITAL ASSETS

| Cost | Land | Buildings and leasehold improvements | Maintenance equipment | Office equipment | Water infrastructure | Total |
|---|---|---|---|---|---|---|
| Balance, March 31, 2015 | $ 5,155 | $ 1,858 | $ 3,819 | $ 2,449 | $ 424,832 | $ 438,113 |
| Additions | - | - | 320 | 120 | 14,445 | 14,885 |
| Disposals | - | - | 10 | 334 | - | 344 |
| Balance, March 31, 2016 | $ 5,155 | $ 1,858 | $ 4,129 | $ 2,235 | $ 439,277 | $ 452,654 |

| Accumulated Amortization | Land | Buildings and leasehold improvements | Maintenance equipment | Office equipment | Water infrastructure | Total |
|---|---|---|---|---|---|---|
| Balance, March 31, 2015 | $ - | $ 1,115 | $ 2,846 | $ 1,978 | $ 110,154 | $ 116,093 |
| Amortization | - | 181 | 331 | 173 | 4,436 | 5,121 |
| Disposals | - | - | 7 | 334 | - | 341 |
| Balance, March 31, 2016 | $ - | $ 1,296 | $ 3,170 | $ 1,817 | $ 114,590 | $ 120,873 |

| Net Book Value | Land | Buildings and leasehold improvements | Maintenance equipment | Office equipment | Water infrastructure | Total |
|---|---|---|---|---|---|---|
| Balance, March 31, 2015 | $ 5,155 | $ 743 | $ 973 | $ 471 | $ 314,678 | $ 322,020 |
| Balance, March 31, 2016 | $ 5,155 | $ 562 | $ 959 | $ 418 | $ 324,687 | $ 331,781 |

Included in tangible capital assets are assets under construction worth $7,288 (2015 - $8,744).

## 9. GRANTS TO CLIENTS

Included in expenses are grants or assistance provided to various persons and organizations to carry out a variety of programs administered by WSA. Particulars of these grants, by program, are as follows:

| | 2016 | 2015 |
|---|---|---|
| Flood Control and Drainage | $ 1,025 | $ 961 |
| Emergency Flood Damage Reduction Program | 3,567 | 7,200 |
| Watershed Implementation and Projects | 1,146 | 994 |
| Stewardship - Water Quality | 513 | 294 |
| | $ 6,251 | $ 9,449 |

## 10. COMMITMENTS AND CONTINGENCIES

**Contractual Commitments**

As of March 31, 2016, WSA has outstanding commitments of $14,009 (2015 - $7,009) for construction contracts, consulting agreements, software licensing, watershed funding agreements and other services. Within various contractual agreements, WSA has committed to provide in-kind services. If contracts were terminated, WSA's only liability would be for actual costs incurred to date.

Included in total commitments is $6,564 in funding commitments for Flood Relief projects that may be paid out to communities and other entities where costs have been incurred related to flooding.

**Leases**

WSA has entered into various operating lease agreements with the following minimum lease payments:

| | |
|---|---|
| 2017 | $ 1,592 |
| 2018 | 1,643 |
| 2019 | 1,609 |
| 2020 | 1,151 |
| 2021 | 835 |
| Thereafter | 613 |
| | $ 7,443 |

**Litigation**

Water Security Agency is party to fifteen lawsuits (2015 - eleven), related to various water management issues. The outcome of these lawsuits cannot be determined therefore no amounts have been allowed for settlement in these statements.

## 11. RELATED PARTY TRANSACTIONS

Included in these financial statements are transactions with various Saskatchewan Crown corporations, ministries, agencies, boards and commissions related to WSA by virtue of common control by the Government of Saskatchewan and non-Crown corporations and enterprises subject to joint control or significant influence by the Government of Saskatchewan (collectively referred to as "related parties").

Routine operating transactions with related parties are settled at prevailing market prices under normal trade terms. These transactions and amounts outstanding at year end, are as follows:

| | 2016 | 2015 |
|---|---|---|
| Water, contract and other revenue | $ 17,491 | $ 24,588 |
| Purchases | 3,593 | 5,644 |
| Accounts receivable | 5,111 | 6,023 |
| Accounts payable | 828 | 899 |

Details of amounts and transactions due to and from related parties and the terms of settlement are described separately in these financial statements and the notes thereto.

## 12. PENSION PLAN

During the year, WSA's employees participated in the Public Employees Pension Plan and, prior to this, to the Capital Pension Plan (the Plans), which are defined contribution pension plans. WSA's contributions to the Plans included making regular payments into the Plans. The total amount paid into the Plans for 2016 was $1,217 (2015 - $1,173).

## 13. BUDGET FIGURES

The budget figures are presented for comparison purposes. WSA's Board of Directors approved the 2016 budget on March 3, 2015.

## 14. FEDERAL GOVERNMENT TRANSFER FUNDS

In the 2015 and 2014 fiscal years, structures along the Qu'Appelle River were transferred to WSA from Agriculture and Agri-Food Canada (Federal Government). WSA received one-time funding for each of the dams transferred, totalling $11,750 in 2015, to compensate for continuing maintenance and upgrades to these structures. The fair value of all of the structures transferred was $nil. For 2016, $108,300 was budgeted for similar structure transfers, which did not occur.

## 15. FINANCIAL INSTRUMENTS

WSA's financial assets consist of cash and accounts receivables. Financial liabilities consist of accounts payable and accrued liabilities, employee future benefits, deferred revenue and long-term debt.

*Credit risk*
WSA is exposed to credit risk from the potential non-payment of accounts receivable. The carrying amount of accounts receivable represents WSA's maximum credit exposure.
The allowance for doubtful accounts is $nil (2015 - $nil).

*Liquidity risk*
Liquidity risk is the risk that WSA will not be able to meet its financial obligations as they become due. WSA monitors its cash balances and cash flows from operations to meet its requirements.

*Interest rate risk*
WSA is exposed to interest rate risk on its fixed rate long-term debt. The fixed rate instruments subject WSA to a fair value risk due to interest rate fluctuations in the market.

## 16. COMPARATIVE INFORMATION

Certain comparative figures have been reclassified to conform with the current year's presentation.

## 17. INTERNALLY DESIGNATED NET FINANCIAL ASSETS

WSA has internally designated a portion of the Net Financial Assets to be used for various future purposes. Following is a listing of the amounts and expected uses of these funds.

| | 2016 | 2015 |
|---|---|---|
| **Project Name** | | |
| Qu'Appelle Structures Transfer Agreement Funds | $ 35,546 | $ 35,980 |
| Flood Reflief Projects - EFDRP | 4,646 | 7,425 |
| Flood Reflief Projects - Fishing Lake | 2,044 | 3,842 |
| Environment Canada Legal Settlement - Lake Lenore Land Control | 3,116 | 4,000 |
| Qu'Appelle Structures Escrow Funds Repayment - Water Management Agreements | 685 | 779 |
| Unspent Capital Program Funds | 6,706 | 3,588 |
| Water Conservation - Go Green Funds | 487 | 487 |
| | $ 53,230 | $ 56,101 |

**WATER SECURITY AGENCY**
**Schedule 1 - Contract Revenue**

**Year Ended March 31**
**($ thousands)**

| | 2016 | 2015 |
|---|---|---|
| Canadian Wildlife Service | $ 395 | $ 128 |
| Environment Canada | 224 | 200 |
| Wildlife Habitat Canada | 43 | 29 |
| Ducks Unlimited Canada | 50 | - |
| Saskatchewan Ministry of Environment | - | 32 |
| Saskatchewan Ministry of Highways | - | 70 |
| Saskatchewan Ministry of Economy | - | 50 |
| Saskatchewan Ministry of Agriculture | - | 15 |
| | $ 712 | $ 524 |

**WATER SECURITY AGENCY**

**Schedule 2 - Expenses by Program**
**Year ended March 31**
($ thousands)

| | Corporate services | Legal, regulatory and aboriginal affairs | Water use and licensing | Strategic integration and administration | Regional services | Watershed planning and implementation | Infrastructure management | Hydrology and groundwater services | Drinking & wastewater management | Water quality services | Interest & amortization | 2016 Total | 2015 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salaries and benefits | $ 3,432 | $ 755 | $ 873 | $ 595 | $ 3,111 | $ 279 | $ 3,606 | $ 1,834 | $ 3,154 | $ 2,002 | $ - | $ 19,641 | $ 20,365 |
| Travel and other staff costs | 289 | 31 | 14 | 82 | 212 | 18 | 279 | 183 | 276 | 147 | - | 1,531 | 1,614 |
| Professional services | 189 | 264 | - | 424 | 2 | - | 2,611 | 1 | 163 | 413 | - | 4,067 | 2,155 |
| Office supplies | 1,124 | 10 | 5 | 26 | 75 | 7 | 56 | 31 | 54 | 32 | - | 1,420 | 1,373 |
| Materials | - | - | - | - | 3 | - | 143 | 20 | 15 | 23 | - | 204 | 199 |
| Contractual services | 2 | 33 | - | 491 | 194 | - | 370 | 936 | 374 | 1 | - | 2,401 | 2,714 |
| Cash grants | - | - | - | - | 1,025 | 1,018 | - | - | - | 642 | - | 2,685 | 2,249 |
| Salary allocations | (3,625) | 88 | 102 | 445 | 398 | (115) | 48 | 392 | 886 | 2 | - | (1,379) | (1,758) |
| Other expenses | 1,103 | 6 | 17 | 62 | 435 | 6 | 29 | (2) | 25 | 195 | 6,272 | 8,148 | 7,914 |
| Total | $ 2,514 | $ 1,187 | $ 1,011 | $ 2,125 | $ 5,455 | $ 1,213 | $ 7,142 | $ 3,395 | $ 4,947 | $ 3,457 | $ 6,272 | $ 38,718 | $ 36,825 |

# For More Information

More detailed information can be obtained by visiting the Water Security Agency's website at www.wsask.ca, calling its head office in Moose Jaw at 306-694-3900, or contacting the water inquiry line toll free at 1-866-SASK-H20 (1-866-727-5420) or SaskH20.ca.

# Appendix A

## 25 Year Saskatchewan Water Security Plan Report for 2015-16

| Action Number | Action Description |
|---|---|
| 1.1a | Promote adoption of best conservation and efficiency practices and technology through education, regulations, water licence conditions and new programming<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA is developing a new water allocation policy which wll provide guidance on water licensing conditions around efficient water use. |
| 1.1b | Investigate pricing strategies as a means of promoting water conservation<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: This work is proceeding as part of the new allocation policy, which is expected to be completed in 2016-17. |
| 1.1c | Work with partners to promote research and development of innovative technology that improves the efficient use of water<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: No activity |
| 1.2a | Evaluate existing water supplies and future demands for the next 25 years and beyond to determine the need for new infrastructure across the province<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: The Upper Qu'Appelle model and the Water Resources Management Model (WRMM) were developed and need documentation. An assessment of the water availability from Lake Diefenbaker for irrigation purposes has been started. |
| 1.2b | Investigate alternative measures to increase the delivery of water from Lake Diefenbaker to Buffalo Pound Lake, including evaluation of the feasibility of the Qu'Appelle South irrigation project<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2014-15. |
| 1.2c | Examine alternative ways of instituting the concept of "user-pay" with respect to the development of additional provincially owned, multi-purpose water supply infrastructure<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2014-15. |
| 1.3a | Develop a modern system of water allocation, including a new allocation policy and regulations<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Work on allocation policy is continuing and expected to be completed in 2016-17. |
| 1.3b | Review existing water rights licences and assess current water use<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Initial review of Yorkton Water Rights files were completed in January of 2016. Review of North Battleford Water Rights files is ongoing. |

| Action Number | Action Description |
|---|---|
| 1.3c | By watershed, determine the existing use of water, level of protection of environmental flows, how much water is available for future allocation, and identify areas where water scarcity may be a factor<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Water use data is collected and compiled annually with the ability to report use by watershed as well as by sector. Water availability models have been completed for Souris River and the Saskatoon Southeast Water Supply System. Lake Diefenbaker and Swift Current Creek models are being worked on. Qu'Appelle River model is being updated. |
| 1.4a | Work with Canada to continue to assess and seek funding support for further irrigation opportunities<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: Growing Forward 2 programming was accessed and funds were paid out for irrigation development ($3.91M) and adoption of irrigation best management practices ($12K). |
| 1.4b | Develop an irrigation strategy that prioritizes opportunities for infill and new irrigation projects for development and assess the need for irrigation infrastructure rehabilitation<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: Completed in 2014. The Ministry of Agricultre hosted an irrigation stakeholder meeting in November 2015 to obtain industry feedback. The Ministry plans to keep the irrigation strategy current through ongoing dialogue with the irrigation industry and incorporating revisions, where possible, while maintaining strategy ownership. |
| 1.4c | Work with Canada to transfer ownership of federal irrigation projects to local patrons<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: Discussions with Federal-Provincial governments on the transfer of the ownership of federal irrigation projects to local patrons continue. |
| 1.4d | Develop new criteria for allocation licensing based on best practices and new technologies to sustainably support irrigation<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: The Ministry of Agriculture participated as part of the steering committee for the Value for Water study that was completed in November 2015. The Water Security Agency continues to work towards new legislation. |
| 1.5a | Continue work with research partners on climate change impacts to identify possibilities for adaptation<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Research on Lake Diefenbaker water quality, which incorporates climate change, is continuing. The Water Management Committee of the Canadian Council of Ministers of Environment is initiating a project to improve understanding by all jurisdictions of options around planning for climate change impacts including flood and drought. At year end a request for proposal (RFP) was being developed and is expected to be issued in early 2016-17. |
| 1.6a | Develop detailed aquifer maps<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Work on Southeast Aquifers is progressing. |
| 1.6b | Analyze the water supply situation in the major rivers<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA is making progress on this action. The Upper Qu'Appelle model and the Water Resources Management Model (WRMM) were developed and need documentation. An assessment of the water availability from Lake Diefenbaker for irrigation purposes has been started. |
| 1.6c | Determine the existing water use by sector and delineated by the major basin<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2013-14. |

| Action Number | Action Description |
|---|---|
| 1.6d | Examine projected water demand by sector within major basins to the year 2060<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2013-14. |
| 1.6e | Identify environmental flows to support the aquatic ecosystem<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Field survey and assessment of Mountain Sucker on south slope of Cypress Hills indicates water management is unlikely a significant threat to Mountain Sucker given extractions have not increased in 50 years, flows from Alberta are slowly increasing, and in most years Saskatchewan inputs exceed extractions. |
| 1.7a | Determine economic value of water in alternative uses<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: This project was completed and a final report on the value of water was submitted to WSA in 2015. |
| 1.7b | Assess how the economic value of water could be used in allocation decision making<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: The final report on the value of water was submitted to WSA in 2015. This report includes recommendations on incorporating economic value into water management decisions. |
| 2.1a | Review and update the province's approach to safe drinking water, including consideration of the 2002 Laing Report and the 2002 Safe Drinking Water Strategy<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: A preliminary review has been completed along with development of recommendations. Drafting of regulatory revisions needing attention as a result of the preliminary review was underway as of March 31, 2016. Safe drinking water strategy is fundamentally sound; however, some fine tuning of regulatory requirements are needed. Consultation on preliminary review is still to occur. Waterworks and Sewage Works Regulations took effect on June 1, 2015 and include some significant progress. |
| 2.1b | Investigate and encourage opportunities for regional water treatment plants and distribution pipelines to increase access to, and protection of, high quality drinking water<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: This action is conducted during inspections and interaction with waterworks owners where applicable and practical from a supply perspective. Example: development of a regional system in the Estevan-Weyburn region (Rafferty regional waterworks system). |
| 2.1c | Evaluate the financial needs of communities for operation, maintenance and renewal of water infrastructure<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: Completed. During 2015, Water Security Agency required 188 municipalities to do assessments of their waterworks. The assessment included examination of the financial viability of drinking water systems including: annual operation and maintenance costs of the municipal waterworks, an estimate of the capital replacement costs of any major system components that are expected to require replacement within the next 10 years, approximate cost estimates for anticipated non-routine maintenance, upgrades or expansions, and recommendations of appropriate water rates to meet future costs. Waterworks system assessment on smaller systems were completed in previous years. |

| Action Number | Action Description |
|---|---|
| 2.1d | Develop a strategy to encourage communities to renew drinking water infrastructure<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: WSA and Ministry of Government Relations are reviewing initial Terms of Reference for this action item. The province has confirmed commitment to being a full funding partner under the Federal Government's New Building Canada Fund. The Government of Saskatchewan announced provincial funding for 14 projects that have a municipal drinking water component. These 14 projects have a total project cost of $17.1 million. Drinking water infrastructure renewal will also be supported through the Federal Gas Tax Fund. Municipalities are also able to utilize unconditional Municipal Revenue Sharing funds for infrastructure projects, at their discretion. |
| 2.1e | Assess, with federal and First Nations governments, opportunities for the province to provide infrastructure, including connections to regional water systems, and technical and inspection services on reserves on a cost-recovery basis<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Information and assessment of the option for provision of drinking water via regional infrastructure is performed during meetings, public events and interaction with First Nations as well as during general educational efforts on safe drinking water. WSA will be evaluating the provision of inspection services as regulations are developed pursuant to The Safe Drinking Water for First Nations Act. Consideration of possible regulation of the Whitecap Dakota First Nation water and sewage works at the request of the First Nation and met with the First Nation in the third quarter of 2015-16. WSA provided information on regulatory implementation costs to Indigenous and Northern Affairs Canada (INAC) in the fourth quarter of 2015-16. Federal administration may be changing the regulatory development processes for safe drinking water on First Nation's related regulations. |
| 2.2a | Review and rationalize the regulatory regime applying to semi-public systems<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Some initial consideration of improvements in the regulatory regime for semi-public works has been completed from the WSA perspective. Further work will follow the review of the Safe Drinking Water Strategy that is currently underway. |
| 2.2b | Support research on water treatment technologies for point of use water systems<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Monitoring of trial Point of Entry (POE) installation was completed Feb 2016. Awaiting report from consultant - due April 30, 2016. |
| 2.3a | Implement an effective education and information strategy to raise awareness of drinking water safety issues, including information on proper well management, system operation and maintenance, water quality testing, and identification of and solutions for groundwater quality problems<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Education materials were developed and delivered at the Saskatchewan Water and Wastewater Association (SWWA) workshop. Fact sheets have been revised and posted on the SaskH2O website. |
| 2.3b | Encourage testing of private water supplies, including testing for heavy metals<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: This action was delayed due to employee's education leave. |
| 2.3c | Provide water testing and treatment advice in at risk locations during emergency events such as flooding that pose a high risk of drinking water contamination<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA provided advice during spring runoff related flooding events. Water from wells that had been flooded has been tested, and treatment strategy/advice is being developed. |

| Action Number | Action Description |
|---|---|
| 3.1a | Evaluate the status of existing municipal wastewater facilities to determine needs for upgrades<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Complete. WSA completed a technical assessment of the status and capacity of all regulated wastewater systems in Saskatchewan in 2015-16. Also completed evaluation of risk assessments for wastewater systems subject to the Wastewater System Effluent Regulations and the Canadian Council of Ministers of the Environment Canada-wide Strategy for Municipal Wastewater Effluents. Tracked the status of municipal wastewater facility for compliance with standards as a means to direct needed upgrading priorities. |
| 3.1b | Develop an agreement with Environment Canada for coordinated implementation of the Canadian Council of Ministers of the Environment Municipal Waste Water Effluent Canada-Wide Strategy and the Federal Wastewater System Effluent Regulations<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Complete. As of July 2015, an agreement was in place with Environment Canada for WSA to deliver the Wastewater System Effluent Regulations in Saskatchewan. Two coordination committee meetings were held with Environment Canada and imnpolementation under the agreement wil continue. |
| 3.1c | Develop a strategy to encourage the renewal of municipal wastewater treatment infrastructure to ensure protection of water quality in receiving water bodies<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: WSA and Ministry of Government Relations are reviewing the initial Terms of Reference for this action item. The province has confirmed commitment to being a full funding partner under the Federal Government's New Building Canada Fund by announcing provincial funding for 23 projects that have a municipal wastewater component. The 23 projects have a total project cost of $31.1 million. Wastewater infrastructure renewal will also be supported through the Federal Gas Tax Fund. Municipalities are also able to utilize unconditional Municipal Revenue Sharing funds for infrastructure projects, at their discretion. Priority northern municipal wastewater projects continue to be addressed with project management support from SaskWater. The Northern Water and Sewer Program provided funding to upgrade water and sewer systems in northern communities. Saskatchewan is working with the federal government to maximize benefits from new infrastructure funding programs announced in the 2016 federal budget. WSA has since performed estimates of sewage works upgrading costs for small communities serving less than 1,000 people based on knowledge of treatment / system deficiencies. WSA has performed efforts to educate municipalities though direct communications during inspections and at an array of meetings and conferences since the 25 year plan was initiated. |
| 3.1d | Develop coordinated policies to reduce risk of water contamination that may result from residential wastewater management in high density rural developments and cottage subdivisions<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Development of formal policies has not yet started. However, significant effort and progress to improve the practices of Liquid Domestic Waste haulers has been achieved through waste hauler workshops and compliance related actions. |
| 3.1e | Define water quality objectives, including nutrient-related objectives, for surface water bodies and watercourses in the province, beginning with the highest priority systems and including work on key transboundary sites<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: New water quality objectives were developed under the Prairie Provinces Water Board for 6 sites along the Alberta-Saskatchewan border and 6 sites on the Saskatchewan-Manitoba border. |
| 3.1f | Implement a recreational lake water quality monitoring program for swimming areas at lakes across the province<br><br>**LEAD AGENCY: Ministry of Health**<br><br>Update: Complete. Ministry of Health (MOH) and Health Regions have been delivering a recreational beach monitoring program since 2013-14. In 2015, MOH monitored select public beaches at recreational lakes and collaborated with two watershed associations for sampling of some beaches in the Qu'Appelle Valley. |

| Action Number | Action Description |
|---|---|
| 3.1g | Provide information and encourage the implementation of beneficial land and water management practices to reduce non-point sources of nutrients and other contaminants to surface and groundwater<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA works with and provides financial support to 11 watershed stewardship groups which lead on the ground delivery of beneficial practices, particularly by delivering program with funding from Ministry of Agriculture under Growing Forward 2. |
| 3.1h | Complete the Boreal Watershed Initiative<br><br>**LEAD AGENCY: Ministry of Environment**<br><br>Update: Field work for the Boreal Watershed Initiative has been completed. All final reports were in-hand as of late March 2016, and are being edited and compiled. Preparation of a wind-up document containing some 45 technical reports and several large geospatial databases is underway. Release of a wind-up report anticipated in Fall 2016. Models of critical loads of acid for soil and lakes have been developed and mapped. Monitoring of acid sensitive lakes is ongoing (Environment Canada). Paleolimnology indicates climate change over the last 50 years is also altering lake hydro-chemical equilibria. |
| 3.1i | Define a strategy to reduce the contamination risk posed to groundwater sources by abandoned water wells<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2013-14. |
| 3.1j | Negotiate with Canada a new commitment to continue the Environmental Farm Plan Program, with a focus on nutrient management and protection of water supplies<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: Completed in 2013-14. |
| 3.2a | Prepare a new provincial wetland policy that includes an assessment of the status of wetlands in the province and identification of conservation priorities, including a strategy to retain and restore wetlands<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA initiated, with the National Wetland Conservation Fund, a new wetland restoration initiative. Wetland protection and restoration initiatives were tested as part of the WSA's agricultural drainage pilots implemented in 2015-16. |
| 3.3a | Establish site-specific objectives for environmental flows in priority surface water systems<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Qu'Appelle water managers are confident that environmental flow objectives can be met in most, if not all years. |
| 3.3b | Prepare an aquatic alien species strategy to identify and address significant threats to biodiversity and ecosystem health<br><br>**LEAD AGENCY: Ministry of Environment**<br><br>Update: Ministry of Environment efforts in 2015-16 continued to focus on addressing the immediate risks posed by invasive mussels, which continued to delay the work on the aquatic alien species strategy. Considerable effort was dedicated to refining risk assessment information, raising public awareness, developing monitoring protocols and collaborating with other jurisdictions. Work commenced on the strategy in October 2015 with a goal for completion by December 2016. |
| 3.3c | Develop protocols with the Department of Fisheries and Oceans to ensure the ongoing protection of fish habitat under the new federal Fisheries Act<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Coordination of Aquatic Habitat Protection Permitting process with Fisheries and Oceans Canada's (DFO) new approach has been achieved. Provincial-Federal issues are dealt with through the Saskatchewan Fisheries Issues Committee. |

| Action Number | Action Description |
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| 3.4a | Update the source water protection planning process to achieve resilient, locally appropriate source water protection plans that are informed by science to identify key local threats to source water protection, address drinking water source protection, an<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA engaged the watershed stewardship groups at a forum on March 3, 2016 on developing a model and work on this model is continuing. |
| 3.4b | Work with Saskatchewan Association of Watersheds to more clearly identify the future roles and responsibilities of watershed and aquifer planning groups, including the renewal of source water protection plans<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: As well as renewed communications with Saskatchewan Association of Watersheds (SAW), program staff have held 3 workshops (Sept. & Dec, 15 & Mar. 16) with SAW & the 11 watershed stewardship groups toward undertaking strategic business planning & strategic thought toward program direction, goals, roles & responsibilities. |
| 3.4c | Evaluate the need to expand source water protection planning to additional watersheds or aquifers<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Human resource constraints have temporarily precluded the capacity to accomplish this initiative. |
| 3.4d | Assess and renew the approach to implementing source water protection plans to ensure that threats to source water are mitigated into the future<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA program staff held a third workshop in March 2016 where the collaboratively developed work planning and reporting strategy was unveiled for implementation. This planning and reporting structure will contribute towards the implementation of an innovative new approach to implementing watershed plans. This process will be evaluated and refined in 2016-2017. |
| 4.1a | Implement the Water Security Agency's 10 year plan for infrastructure rehabilitation and dam safety<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: The major initiatives in the 10 year plans have been addressed. |
| 4.1b | Establish legislative requirements for dam safety for both public and private dams and identify long term strategies for compliance<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: During 2016-17, WSA plans to consult on comprehensive new water legislation, including potential dam safety provisions. |
| 4.1c | Complete emergency preparedness plans for major Water Security Agency dams<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2013-14. |
| 4.2a | Review existing reservoir operating plans and update them on a priority basis<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Lake Diefenbaker options analysis report has been drafted. Next step is finalizing the report and making recommendations for operating objectives. |
| 4.2b | Negotiate transfer of federally owned infrastructure to the province where appropriate to meet provincial interests<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Negotiations on transfer of priority dams were initiated in 2015-16 and are continuing. |

| Action Number | Action Description |
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| 5.1a | Develop improved flood forecasting tools<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Wascana Creek model is complete but the model did not provide reliable results. A study from University of Saskatchewan expected in 2016-17 will inform future improvements. |
| 5.1b | Develop a provincial emergency flood response plan that addresses community, individual and local government responsibilities<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: Complete. The all-hazards Provincial Emergency Management Plan is reviewed annually and updated as needed. |
| 5.1c | Develop a strategy to ensure communities and the public have access to flood hazard information and are aware of potential flood risks<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: SaskAlert system is in place for emergency alerting. WSA is working with the Federal government to update and add new floodplain mapping. |
| 5.1d | Undertake a flood risk assessment of municipal drinking water and wastewater infrastructure<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA's Environmental Project Officers have general awareness of the flood risk to drinking water and wastewater infrastructure. No formal listing of facilities at risk has been started yet. |
| 5.1e | Encourage municipalities to map flood risk areas associated with under-capacity of wastewater and storm sewer infrastructure as projected in the Insurance Bureau of Canada's report on impacts associated with climate change<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: The province has switched to a broader flood risk assessment strategy, in part to capture funding under the Federal National Disaster Mitigation Program. |
| 5.1f | Implement the flood protection and prevention measures established in The Statements of Provincial Interest Regulations into local official community plans and zoning bylaws<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: This is ongoing, and is being implemented as communities renew their official community plans and zoning bylaws. In 2015-16, 39 new official community plans were approved with flood prevention and protection measures as contained within The Statements of Provincial Interest Regulations (SPI). In addition, 1,188 subdivisions totaling 2,697 sites were approved that meet the flood protection standards contained within the SPI. |
| 5.1g | Pursue negotiations with Canada to develop and implement a new long term federal-provincial program for flood mitigation as part of an all hazards program<br><br>**LEAD AGENCY: Ministry of Government Relations**<br><br>Update: Working with Federal Government in addressing damage reduction for communities under the National Damage Mitigation Program(NDMP). In 2015, Saskatchewan applied for NDMP funding to complete, by March 2018, a provincial hazard risk assessment to rank our most costly and dangerous natural hazards. Canada has recently approved this proposal but requires Saskatchewan to finalize a federal-provincial agreement before it will release their 50 percent of the $184,000 total project cost. Ministry of Government Relations will lead the risk assessment project and coordinate future project intakes for the remaining four years of the NDMP program with other government partners. |

| Action Number | Action Description |
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| 5.2a | Assess the range of alternatives and implement strategic actions to manage drainage<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA announced the new Agricultural Water Management Strategy and new drainage regulations in the fall of 2015. Two pilot implementation projects were initiated. The information gathered from the drainage pilot projects will guide next steps in implementation. |
| 5.2b | Develop a results-based drainage works approval process and associated enforcement strategy, including the potential use of financial penalties<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: New drainage regulations are in place. Two drainage pilots were completed in 2015-16. Phased implementation of the new drainage regulations will proceed in 2016-17. |
| 5.2c | Develop new strategies to effectively address excessive moisture concerns on agricultural lands, including provision of information and advice on proper drainage design and management and consideration of the benefits of wetland retention and restoration<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA is looking at mitigation options. Wetlands and wetland mitigation and implementation of drainage approval process are tightly linked. Looking towards development of excess moisture issues strategy. |
| 5.3a | Develop a coordinated provincial drought response plan that includes monitoring, preparedness, response, and recovery approaches<br><br>**LEAD AGENCY: Ministry of Agriculture**<br><br>Update: Ministry of Agriculture completed an Agricultural Drought Plan. WSA is currently working on the hydrological drought plan. Discussions have taken place between WSA and Ministry of Agriculture to potentially incorporate the hydrological plan within the agriculture drought plan. |
| 5.3b | Develop new regulations for water allocation to help manage water shortages during droughts<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Working on development of water allocation legislation. Water allocation regulations will follow the legislation. |
| 6.1a | Complete a strategic review of major monitoring programs, including surface water, groundwater and water quality<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Assessment of the surface water quality monitoring program is underway, but analysis and development of recommendations have been delayed. Current schedule for completion of final report by Fall 2016. |
| 6.1b | Develop an integrated geographically referenced database to provide government-wide and public access to water-based information<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA implemented a location based platform in 2015-16 and it is expected that the public on-line Water Wells application will be upgraded to the location based platform in the first quarter of 2016. |
| 6.1c | Consolidate precipitation data and information through the development of cooperative agreements and partnerships with government and non government organizations<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: A cooperative agreement with Weather Innovations Network for rainfall mapping products has been signed. |

| Action Number | Action Description |
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| 6.2a | Establish protocols for informing the public during emergencies related to flood, drought, infrastructure failure, and water quality and drinking water concerns<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2014-15. |
| 6.2b | Develop a user-friendly water information portal on the new Water Security Agency web site to make information on water and water management issues widely available<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: The Wells database is nearly ready to be posted on the WSA's website using Geocortex. The intent is to follow with other data sets. |
| 6.2c | Report on progress in implementing the 25 Year Water Security Plan<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Reported by means of this document. |
| 6.2d | Publish the State of the Watershed Report every five years in an expanded form which can be applied by government in the renewal of the 25 Year Saskatchewan Water Security Plan and by the public in decision making<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Abandoned. WSA will provide material for State of Environment Report, but will no longer publish a State of the Watershed Report. |
| 6.3a | Support the work of the Global Institute for Water Security at the University of Saskatchewan in their assessment of the water supply and quality issues in the South Saskatchewan River<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: The Lake Diefenbaker study with the University of Saskatchewan is continuing. |
| 6.3b | Identify opportunities to collaborate with external academic and research partners on defining and undertaking strategic research initiatives<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Assessment of Lake Diefenbaker water quality with the University of Saskatchewan will continue in 2016-17 and collaborating with the University on flood forecasting improvements.. |
| 7.1a | Develop modern and comprehensive water legislation<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: In 2015, three regulations were repealed and one regulation revision was completed. WSA plans to consult on comprehensive new water legislation during 2016-17. |
| 7.2a | Establish provincial Deputy Ministers' Water Committee<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Committee held one meeting during the year. |
| 7.2b | Work with Canada to identify opportunities to improve regulatory and program coordination and collaboration<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA continues to meet with Fisheries and Oceans Canada (DFO) and Environment Canada under the protocol agreement to discuss issues of concern. WSA has signed an agreement to lead implementation of the Federal Wastewater System Effluent Regulations. |

| Action Number | Action Description |
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| 7.3a | Develop improved models for engagement with First Nations and Métis to better understand their perspectives on water and water management and facilitate effective working relationships<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA is moving from a model focused on training staff to a new model based on the success WSA has working with non-aboriginal communities. One key shift then is to move from a dialogue centred on adverse impacts to an interest-based and and collaborative approach. The second key shift is to do this on a case-by-case basis using a mentoring approach rather than through training. |
| 7.3b | Where water management decisions may have an adverse impact on the exercise of treaty and aboriginal rights and pursuit of traditional uses, consult with First Nations and Métis in accordance with the First Nations and Métis Consultation Policy Framework<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA undertook pre-consultation and consultation processes with a number of First Nation and Métis local governments regarding regulatory approvals or planning initiatives in an attempt to identify potential adverse impacts to treaty or Aboriginal rights and to seek options for avoiding or mitigating such impacts. |
| 7.4a | Establish the Provincial Water Council with sector-based representation<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: This action has been abandoned. WSA has developed an engagement strategy which includes regular meetings with major stakeholders instead of a water council. |
| 7.5a | Investigate new approaches to engage the public and local governments on water issues and decisions of importance to them<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Complete. WSA has developed a new engagement strategy. |
| 7.6a | Continue to work with the Prairie Provinces Water Board to evaluate the resiliency of the Master Agreement on Apportionment<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Complete. The PPWB's Committee on Hydrology has delivered its report on the resiliency of the Master Agreement on Apportionment. WSA has used the results of this report to develop an inflow scenario representing a 1:100 drought of 10 year duration to examine the resiliency of Lake Diefenbaker under various operating policies. |
| 7.6b | In support of the Mackenzie River Basin Board, negotiate bilateral agreements with Alberta and North West Territories<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Work is progressing on both the AB and NWT bilateral agreements , and will extend into fiscal 2016/17. |
| 7.6c | Continue to work with the International Souris River Board of the International Joint Commission to establish an enhanced operating plan for Rafferty and Alameda reservoirs<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Inflow design flood confirmation to come followed by drafting of the reservoir operating plan and solicitation of US feedback. |
| 7.6d | Continue to support the work of the Council of the Federation Water Stewardship Council to use information and experience from other jurisdictions across Canada to address water problems in Saskatchewan<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Completed in 2013-14. |

| Action Number | Action Description |
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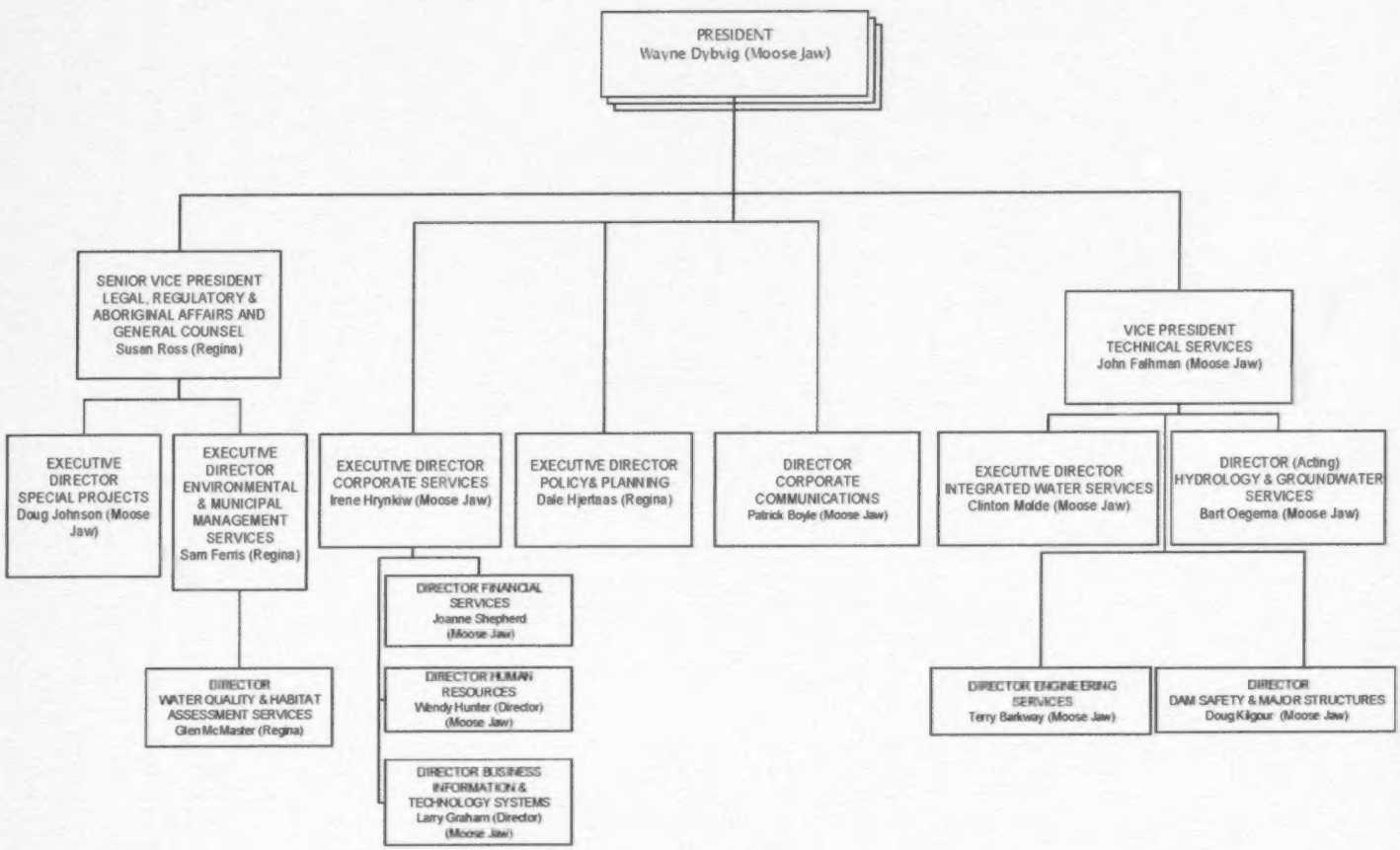
| 7.6e | Continue to work with the Canadian Council of Ministers of the Environment to address emerging water issues common to all jurisdictions<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: WSA to continue to serve on the CCME Water Management Committee and the Federal-Provincial-Territorial Committee on Drinking Water to develop national drinking quality guidelines. Participated in both CDW meetings in the 2015-16 fiscal and through conference calls. WSA to continue to serve on the Water Quality and Pesticide task groups. Participated in meetings of these groups via conference calls. |
| 7.7a | Undertake comprehensive water management analyses for priority surface and groundwater systems<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Groundwater flow model for the southeast aquifer system has been calibrated and is undergoing testing. |
| 7.7b | Implement new watershed modeling and database management systems to allow efficient evaluation of new requests for water and ensure that cumulative effects are considered<br><br>**LEAD AGENCY: Water Security Agency**<br><br>Update: Capacity exists to model water demands under current hydrologic conditions for the South Saskatchewan, Qu'Appelle, Saskatoon South East Water Supply (SSEWS), and Bigstick systems. Work was initiated to bring models up to date for the Swift Current Creek and Souris systems in 2016-17. |

# Appendix B

## Organizational Structure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Wayne Dybvig (Moose Jaw)
SENIOR VICE PRESIDENT LEGAL, REGULATORY & ABORIGINAL AFFAIRS AND GENERAL COUNSEL
Susan Ross (Regina)
EXECUTIVE DIRECTOR SPECIAL PROJECTS
Doug Johnson (Moose Jaw)
EXECUTIVE DIRECTOR ENVIRONMENTAL & MUNICIPAL MANAGEMENT SERVICES
Sam Ferris (Regina)
DIRECTOR WATER QUALITY & HABITAT ASSESSMENT SERVICES
Glen McMaster (Regina)
EXECUTIVE DIRECTOR CORPORATE SERVICES
Irene Hrynkiw (Moose Jaw)
DIRECTOR FINANCIAL SERVICES
Joanne Shepherd (Moose Jaw)
DIRECTOR HUMAN RESOURCES
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VICE PRESIDENT TECHNICAL SERVICES
John Fallhman (Moose Jaw)
EXECUTIVE DIRECTOR INTEGRATED WATER SERVICES
Clinton Molde (Moose Jaw)
DIRECTOR (Acting) HYDROLOGY & GROUNDWATER SERVICES
Bart Oegema (Moose Jaw)
DIRECTOR ENGINEERING SERVICES
Terry Barkway (Moose Jaw)
DIRECTOR DAM SAFETY & MAJOR STRUCTURES
Doug Kilgour (Moose Jaw)

# Appendix C

## Legislation Administered by Water Security Agency

*The Water Security Agency Act*

*The Conservation and Development Act*

*The Water Power Act*

*The Watershed Associations Act*

*Portions of The Environmental Management and Protection Act, 2010*

*Portions of The Public Health Act, 1994*